FASTRIP™ VERSION 10

USER'S MANUAL

MANUAL VERSION 1.1 - REVISED FEBRUARY, 2009

FASTRIP VERSION 10.0
FOR WINDOWS

FastRIP STANDARD
Epson Models: 1520, 3000, 2200, R1400, R1800, R1900, R2400

FastRIP PRO
Epson Models: 4000, 4800, 4880

FastRIP XL
Epson Models: 7600, 7800, 7880

FastRIP LF
Epson Models: 9600, 9800, 9800

REALLY IMPRESSIVE PRINTS

Post Script Interpreter for Non-Post Script Inkjet Printers

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CHAPTER 1

Introduction

Welcome to FastRIP 10.0

Congratulations on purchasing FastRIP, the affordable PostScript printing solution for non-PostScript printers. PostScript is an industry-standard scripting language that describes the text and graphic elements of a print job. When FastRIP processes a job, PostScript elements are used to generate a raster image (a series of horizontal lines) that the printer is capable of rendering. The printer will then print your image one raster line at a time.

FastRIP performs the task of a Raster Image Processor (RIP), not only handling PostScript interpretation, but also performing high-speed memory management of the raster image and the spooling of multiple jobs to the printer. FastRIP utilizes Virtual Memory (VM) disk processing to do this. VM processing means PostScript file size limitations have been nearly eliminated while also supporting up to PostScript Level 3 images.

FastRIP enhances and streamlines your Epson print applications and screen preparations, and (with the exception of the Epson 1400, R1800, R1900, R2400, and 2200) provides Variable Dot Halftone (V-dot) support. With V-dot support, this increases the available number of shades by a factor of (times) 3 for a single black channel, and this process works across multiple black channels to provide up to (times) 12 shades. The net results are higher quality separations that can be produced in less time. The media profiles (print modes) provided with FastRIP have V-dot support incorporated into each print mode, so this technology is automatically applied by selecting the print mode that best corresponds to the loaded media, image resolution, etc.

FastRIP has also been developed to incorporate inkjet-to-garment printing in conjunction with using FastARTIST and a T-Jet® Series inkjet-to-garment printer. Some features of FastRIP 10.0 may only apply to screen print film positives and some may only apply to inkjet-to-garment printing.

NOTE: It is expected that you have read and understood the Operator's Manual that was provided with your printer, and that you are aware of the printer's capabilities. For example, the Epson Photo Stylus R1800 is the only model listed that does not support Variable Dot Halftones. As such, FastRIP supports high quality halftones for the Photo Stylus R1800, though not the additional multiples of shades that are achievable using V-dot technology. Regardless, once you have installed FastRIP and performed a test print, return to this manual and review the workflows contained herein to help you understand the FastRIP features.

PostScript and Raster Images

The term "raster display" originates from the method by which television images are created in a series of horizontal scan lines. Sixty times a second (60 Hz), these scan lines are rendered from top to bottom on a cathode-ray tube (CRT). This frequency is faster than the brain can process the information, thus allowing a sequence of still pictures to create the illusion of movement. Televisions and computer monitors are referred to as raster displays and the rectangular pattern of horizontal lines refers to a raster.

A printer is also considered a raster display, since printing requires text and graphics to be translated into a rectangular pattern of horizontal lines. The printer will then lay ink upon the media for each raster line, rendering the final image. The process of creating a **Raster** from text and graphic elements is known as "rasterization."

Printers - PostScript versus Non-PostScript

A **PostScript** file is a computer file that contains page layout descriptions for a print job. The term "PostScript Printer" originated in the late 1980's to describe printers designed to receive PostScript files from networked computer terminals. When computers were not nearly as powerful as today's machines, a central printer would be customized with expensive memory and an upgraded microprocessor. This printer could then combine a PostScript file with printer-resident fonts, as well as any graphics or additional fonts that were transmitted with the PostScript file. This printer would then perform the raster image processing (RIP) task and output the results.

Using a PostScript printer was considered efficient because it did not require each of the networked computers to handle the complicated rasterization process. Each computer was only required to transmit a relatively small PostScript file, which placed very little demand upon the network.

The term "Non-PostScript Printer" originated in the early 1990's. As PC's became faster and larger amounts of internal RAM became standard, printers no longer had to act as image processors. With less on-board memory and fewer tasks to process, these "dumb" printers were significantly less expensive and they could print much faster. The task of rasterizing the PostScript data was now the responsibility of each desktop or laptop within the network. The printer would merely receive the raster data and produce an output, making no modifications.

Using FastRIP

The FastRIP application is a rasterization solution for non-PostScript printers. FastRIP will take the text and graphic elements of a print job, create the corresponding PostScript data, generate a raster image for the entire job and then manage the spooling of raster data to the printer.

Why You Need FastRIP

Generally, inkjet printers do not come with a PostScript Interpreter. Even with those that do (the Epson Printers use Epson Stylus Pro RIP); their PostScript capabilities are typically designed for color calibration and not halftone output. Halftone dots are the key to printing vibrant or photo-realistic images

FastRIP was designed specifically to handle halftones, enabling an inkjet printer to create output very close to Imagesetter quality using off-the-shelf Epson inkjet ink. The software is also calibrated to allow for the over 50% dot gain produced when printing inkjet ink to clear film. This means that if your graphic specifies a 50% dot, you won't get a 70% dot.

FastRIP Functions

FastRIP is very simple to use. Unlike some RIP's that require you to print to a "hot folder" and jump through several proverbial "hoops" in order to output a job, FastRIP allows you to print directly from within your application.

Film Output- Standard, Double or Triple Density

FastRIP has two functions for clear film output- either **Standard Density** or **Double Density**. For a high quality film such as FastPOS, you can use the Standard Density setting. For films that have a rough coating and/or need a heavier deposit of ink to produce dense Black images, you should use the Double or **Triple Density** setting.

Inkjet Proofs

A major feature of FastRIP is the ability to print a color calibrated **inkjet proof** to show the customer. You can print a standard inkjet proof or you can print a proof using standard halftone dots settings of either 45 LPI (Lines per Inch), 55 LPI. You can even print at 65 LPI to simulate the look of halftones when the image is actually screen printed.

Heat Transfers

FastRIP is calibrated for most off-the-shelf, coated T-Shirt Transfer paper. It does color correction and mirrors the image before output.

A New Era for Inkjet Printers

FastRIP and an inkjet printer now offer a low cost solution to film output. Traditionally printers have had to use large format laser printers for film output.

Although this has been a standard practice for years, "mis-registration" has been an ongoing struggle with no solution. Laser printers use fusing rollers to heat up the media, thereby causing shrinkage and poor registration. The lack of good toner deposit and the matte finish of laser acetate and vellum have caused screen printers headaches for years. Often the only solution has been adjusting exposure to times that are too short for screen durability.

For those who demanded better registration and denser images, the only option was to use a dry thermal system. At $7,000 to $15,000 per system, one got excellent registration but lower resolution than an inkjet. Film Imagesetters were the final solution. They have excellent registration, high resolution for sharper images, and very dense Black areas, but they come with a very hefty price tag. Starting at $20,000 and going up from there, these systems are generally not a viable option for most garment decoration businesses.

The combination of FastRIP and an EPSON 4000, 4800, 4880, 7800, 7880, 9800 or 9880 inkjet printer allows you to produce "near-Imagesetter" quality images without requiring you to take out a second mortgage on your home. It is now possible to get excellent registration, dense Black and sharp edges using standard off-the-shelf ink and clear film that is readily available in a variety of sizes.

The Trade-off

There are trade-offs to using an inkjet that are greatly minimized when you compare the cost savings. An inkjet printer is not as fast as a laser, dry film system or Imagesetter. A color separation that might normally take five minutes for each film to print, may take up to eight or nine minutes for the inkjet. While this does not seem like a big issue, when outputting dozens of films per day, this may be a bottleneck for some shops. Computer processor speed and RAM have a huge impact on the computer "ripping" time.

If speed is an issue, invest in another EPSON, a second copy of FastRIP and a computer workstation. The cost savings over a traditional Imagesetter will still be substantial.

Also, inkjet film needs to dry for a few minutes. You may need to find a system for hanging film (we used to do this when we had cameras). An inkjet may require a little more maintenance than traditional systems. Regular head cleanings should be performed.

Printing from the Epson 4000, 4800, 4880, 7800, 7880, 9800 and 9880, will get you excellent registration with roll or sheet media.

Supported Printers

As of the writing of this Manual, FastRIP 10.0 supports the Epson Stylus Color 1520, 3000, R1400, R1800, R1900, R2400, the Epson Stylus Photo 2200 and the Epson Pro 4000, 4800 and 4880. FastRIP XL supports the Epson 7600/7800/7880 and FastRIP LF supports the Epson 9600/9800/9880. FastRIP 10.0 also supports the T-Jet Blazer Series inkjet-to-garment printers as well as the T-Jet SDT-1000, T-Jet2 SDT 2200 and T-Jet3 Plus and 3300 models.

Security Device Dongle

FastRIP is provided with a software protection device, called a "**Dongle**," to prevent unauthorized use or pirating of the software. For a Windows/PC you can use either a USB or Parallel Port Dongle. You specified the type you wanted when you ordered the software. In either case, the Dongle is visible to FastRIP, yet remains transparent to other applications.

Policy On Lost Or Stolen Security Devices

- The USB security device provided with FastRIP is your proof of purchase. If the dongle is lost or stolen, then that is equivalent to losing the entire software package, and a new package of FastRIP must be purchased.
- In the event of a damaged security device that must be replaced, there is a nominal fee for EXCHANGING a new device for the older device, where the older device must be reclaimed by U.S. Screen.

  This fee is waived where product is still under warranty.
- Regardless, it is recommended that you ensure that your security device is covered under your business insurance policy.

If the Dongle Does Not Work

If failure of the hardware (Dongle) has resulted from accident, abuse or misapplication, U.S. Screen shall have no responsibility to replace the hardware. Replacement will be warranted for the remainder of the original warranty period or 1 (one) year, whichever is longer. If the Dongle ceases to operate within the warranty period, it will be replaced at no charge AFTER it has been returned to the U.S. Screen & Inkjet Technology.

You must insure the Dongle for at least $250 against loss or damage during mailing. If the Dongle is not under warranty, a replacement Dongle may be purchased. Contact U.S. Screen for pricing or for details on purchasing or returning a defective Dongle. All returns must be shipped with a traceable carrier and have a return authorization number on the box provided by U.S. Screen Print & Inkjet Technology.

FastRIP Manual

The electronic version of this Manual is on the FastRIP CD in a folder called FastRIP Manual. It is an Adobe Acrobat PDF file. If you don't have Adobe Acrobat, there is a free version on the FastRIP CD.

FastRIP Support

Toll Free	+1 888-698-5387
Technical Support	+1 480-929-2937
Corporate Office	+1 480-929-0640
Fax	+1 480-929-0766
E-mail:	**support@usscreen.com**
Internet:	**www.screenprinters.net**. Click on the *Support* tab.
Support hours:	7:00am to 6:00pm Monday through Friday
	(Mountain Standard Time) USA
	Emergency Support is also available.

Note: Arizona does not observe "Daylight Savings Time."
In the summer months, Arizona is on the same time as California.

Before calling, please make sure you have watched the video and read the entire Manual. If you are unable to find the answer to your questions in the Manual or the video, you can also visit the FastRIP User's Arena on the internet at **www.screenprinters.net** and click on the *Support* tab. Here you will find news, Frequently Asked Questions, Public Documents, Technical Articles, a Support Request Form and downloads for the FastRIP program.

Support is provided only for the software application FastRIP and not for your Epson inkjet printer. Although we will try to assist you with printer problems, your best option is to contact the dealer from whom you purchased your Epson printer or call the manufacturer's Technical Assistance.

Have your product serial number and history available when calling.

PC System Requirements

FastRIP is a 32-bit Windows application. The following system configurations are the minimum requirements:

- A PC equipped with a Pentium processor 1.25 GHz or higher
- At least 512MB of RAM; 1GB or more is highly recommended. (User's of Windows Vista will need and minimum of 2 GB of RAM for proper operation)
- 200MB free hard drive space recommended
- Windows Vista/XP/2000 Operating System
- USB 1.1 port (high speed 2.0 recommended)

CHAPTER 2

Installation

Basic Printer Setup

Whether you have a large format printer of a standard 13"W format printer, the following steps will apply.

1. Open the box and carefully unpack your Epson Printer.
2. Follow the printers setup instructions.
3. Connect the Printer's power cord to the back of the printer and connect the opposite end to an AC electrical outlet. (We recommend the use of a surge protector to prevent power spikes from damaging the internal components of your printer.)
4. Load the FastINK cartridges into the appropriate slots.
5. Load the Epson cartridges into the appropriate slots.

NOTE: You do not need to turn ON the printer to install ink cartridges. In fact, should you turn ON your printer and connect it to your computer at this time, you may receive a "Hardware not found!" error message. This is not a critical error and can be fixed by turning off your printer. Until you install the Epson Printer Drivers, your computer won't recognize your printer. We will cover installing the printer drivers in the next section.

Cartridge Instructions for Standard Rip versions

Listed below are model specific ink cartridge loading instructions for the Standard versions of FastRIP.

Epson R1800/R2400

The Epson R1800 and R2400 printers are shipped from the factory with UltraChrome (Pigment) inks. UltraChrome ink will NOT work for printing film positives. UltraChrome ink will NOT adhere or dry on film transparencies. We have developed an ink called FastINK and can be used to replace the UltraChrome **Black** cartridge. The **Black** ink is the only cartridge that need be replaced since film positives are only printed in black.

For both the Epson R1800 and R2400, the FastINK Black cartridge goes in slot 5.

Epson R1900

Much like the R1800 and R2400 models, the Epson R1900 is shipped from the factory with UltraChrome (Pigment) inks. UltraChrome ink will NOT work for printing film positives. UltraChrome ink will NOT adhere or dry on film transparencies. We have developed an ink called FastINK and can be used to replace the UltraChrome **Black** cartridge. The **Black** ink is the only cartridge that need be replaced since film positives are only printed in black.

Replace the Epson photo black cartridge with the FastINK cartridge (slot number 6).

Epson 2200

The Epson Stylus Photo 2200 printer is shipped from the factory with UltraChrome (Pigment) inks. UltraChrome ink will NOT work for printing film positives. UltraChrome ink will NOT adhere or dry on film transparencies. We have developed an ink called FastINK and can be used to replace the UltraChrome **Black** cartridge. The **Black** ink is the only cartridge that need be replaced since film positives are only printed in black.

Replace the Epson photo black cartridge with the FastINK cartridge.

Epson 1520/3000

The Epson 1520 and 3000 require no special ink to print on film positives, however, we have developed the revolutionary ink called FastINK that may give better results. Talk to a Sales Representative for more details.

Epson 4000

Insert an UltraChrome Photo Black (T-5433) or FastINK cartridge in slot number 5. If an Epson Matte cartridge is inserted into slot number 5, contact our Support Department for a replacement.

Epson 4800/4880

Insert a FastINK cartridge in slots 5 and 8. Be advised, you should only print on a waterproof film like FastPOS WP.

Epson 7800, 7880, 9800 and 9880

Insert an Epson UltraChrome Photo Black (T-5433), Epson dye-based ink or FastINK cartridge in slot number 1.

NOTE: Epson UltraChrome Ink only works with Waterproof film like FastPOS WP. Epson UltraChrome ink will NOT print film transparencies.

NOTE: Each time you power on your printer, some ink is used to prime the Print Head. Even if the majority of your printing jobs use only one color (mostly commonly Black), you will eventually need to refill or replace the other color cartridges.

Cartridge Instructions for FastRIP High Speed

FastRIP High Speed requires that you have one of the following printers listed below. FastRIP High Speed uses 4 ink cartridges to print out your film positives REALLY FAST! You can still print color images with your printer because the 4 black cartridges utilize the light-colored ink slots.

Epson 4800 and 4880
Epson 7800 and 7880
Epson 9800 and 9880

The 4 black cartridges will go in slots 5-8 on any of the six printer models.

Computer Connections

The following sections will cover connecting your FastRIP dongle to your computer as well as your printer.

Dongle Connection

Both the Parallel port and USB port Dongles require specific steps be followed when connecting them to your computer. Please read the installation instructions completely before connecting the Dongle.

WARNING If you are using a ***Parallel Port Dongle***, you MUST shut down your computer before plugging in the Dongle. Your printer must also be turned OFF. With the printer and computer OFF, you may insert your Dongle after installing the FastRIP software.

IMPORTANT POINT If you are using the Blue-colored ***USB Dongle***, DO NOT plug in the Dongle until AFTER you are finished with the software installation. If the Dongle is inserted into a USB port prior to installing the FastRIP software, Windows may install the wrong driver. It *is* safe to insert the USB Dongle into a USB port while your computer is running.

If your package included either a Kingston or Orange-colored dongle, CONNECT IT NOW. Windows will automatically detect the device. You can then click Next to continue.

If your package included a Blue-colored dongle, then connect it as outlined at the end of the product installation.

Printer Connections

With the printer power still OFF, connect the printer to your computer.

There are a few ways to do this; a USB to Parallel Port connection (using an adapter), a Parallel Port to Parallel Port cable, a USB to USB connection, an Ethernet connection or through FireWire.

NOTE: Not all Epson Printers have USB to USB, FireWire, Ethernet or Parallel, but will at least have one.

USB to USB Parallel (USB adapter) Fire Wire

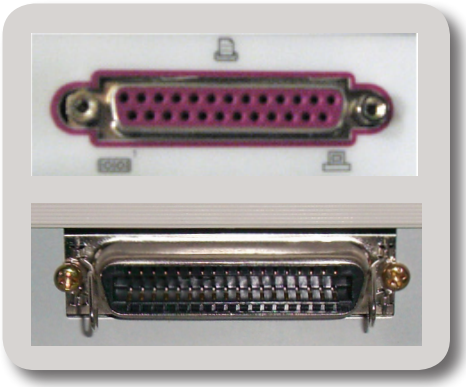
USB Port

A USB Port is much smaller than a Parallel Port. The cord has a small rectangle with a "lip" inside one end and the other end is a hexigon-type shape that plugs into the printer. There are often USB Ports on both the front and back of a computer. It is recommended that you connect your USB cable to one of the back ports to prevent damage to the connector through accidental contact. To connect your printer to your computer via USB cable, most standard USB to Parallel or USB to USB cables will work.

Ethernet USB

Parallel Port

The Parallel Port on both your printer and your computer are large rectangular inputs with the bottom two corners angled slightly inward. The male ends contain "pins." The female ends have receptors for these "pins (top photo)." If you are purchasing a Parallel Cable, most standard Parallel to Parallel Cables (IEEE1284) will work, however, some printer models (recent years) if equipped with a parallel port, it may have a different connection (bottom photo) and require the parallel cord shown above which can plug into your USB slot on your computer.



Ethernet Port

If you are connecting via an Ethernet cable, a 10/100 Ethernet card is required.

FireWire Port

If you are connecting via FireWire, a standard IEEE 1394 cable may be used as long as it does not exceed 10 feet in length.

Installing the Printer Driver

Although FastRIP has its own printer drivers, you must install the printer driver that came with your printer in order to utilize utility programs like Head Cleaning and Nozzle Checks. These are only available for use through your standard inkjet printer driver. If your printer driver has already been installed, skip this section of installation and continue on with Installing FastRIP.

DO NOT install the EPSON Stylus RIP Postscript driver. This driver can confuse the FastRIP installation. If you have already installed this driver, delete the Postscript Epson printer driver and re-install only the standard driver. You can ensure you have the most current inkjet driver by going to **www.epson.com** and downloading the most recent version.

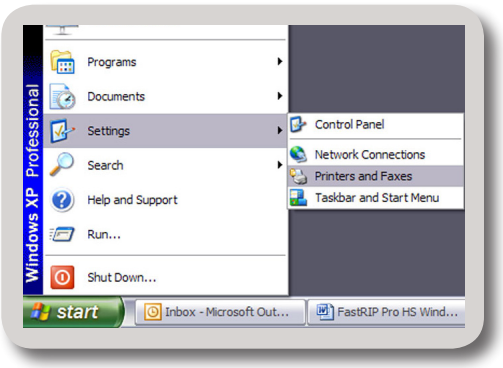
After FastRIP, is installed you will have TWO EPSON drivers - the normal driver and one that FastRIP uses.

1. Load the "Epson Drivers" CD that came with your printer, into the CD drive.
   - Save any work and close any other programs that may be running on your computer at this time, such as Word, Photoshop etc.
   - Insert the Driver CD into your CD drive and follow the on-screen prompts.

NOTE: Install the regular Epson driver for your inkjet printer, but NOT the optional Epson Stylus Pro RIP. You need the normal driver for performing head cleanings and other utilities.

2. Turn the Epson printer ON.

   A message balloon may appear in the bottom right hand corner of your computer screen stating "New hardware found." After a few moments, another balloon may appear with your printer's make and model listed in it. Your computer should now recognize your printer.



You can also check by clicking on *Start* > *Settings* > *Printer and Faxes*. An icon representing your printer should now appear in the Printers and Faxes window that just opened.

3. You must now configure FastRIP to work with your printer.
   - Go to *Start* > *Programs* > *FastRIP 10.0* and click on FastRIP.
   - Select your Epson printer and click on *Next*.
   - On the next screen, select the option "Search for new printer package versions from CD."
   - Place a check mark by "Search CD-ROM or floppy drive."
   - Click on *Next*. Click on *Next*.
   - Click on *Finish*.
4. Next you need to set the default printer your software will use.
   - In the FastRIP main window, go to *Printers* > *Manage Printers*.
   - Place a check in the Control Panel box next to your Epson printer and click on *Ok*.

     FastRIP is now ready to use. Refer to the following section, ***Installing FastRIP Software***, for further instructions.
5. Register your company in the FastRIP User's Arena at **www.screenprinters.net**.

Installing FastRIP Software

At this point, you have confirmed that your FastRIP package contains both the installation CD and Dongle security device. The following steps are an overview of installing FastRIP. Within the installation wizard, further information is provided with each individual stage of the wizard.

The FastRIP installation process will install both FastRIP and printer support files. During the installation of FastRIP, there should be no other applications running. Many antivirus software programs can also interfere with the installation, so it is recommended you also disable any antivirus software until the FastRIP installation process is complete.

The FastRIP CD

In addition to FastRIP, the FastRIP CD contains a 20 day trial version of FastFILMS, a complete catalog of FastART, a catalog of effects available with FastFX, sample files and Adobe Acrobat Reader.

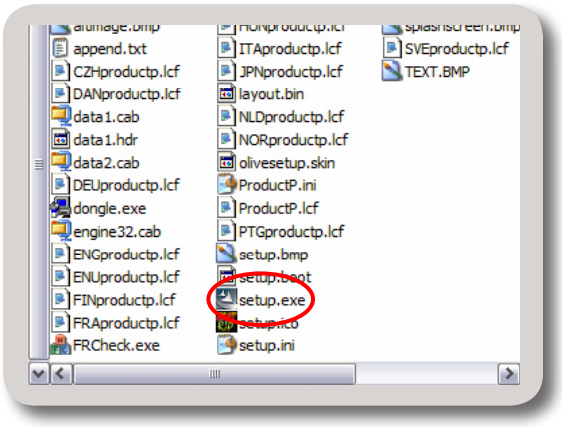
Beginning the Installation

1. Connect the USB security device **NOW**.

Insert the FastRIP CD into your CD drive. The installation program should start automatically.

If the FastRIP installation does not start automatically, follow these steps.

- Click on *Start* > *Run* and then the *Browse* button.
- Find the drive that contains your CD and select the folder named *Install*.
- Open this folder and *double-click* on the file named *Setup.exe*.



IMPORTANT POINT If your package included either a Kingston or Orange-colored dongle, CONNECT IT NOW if you haven't already. Windows will automatically detect the device. You can then click Next to continue.

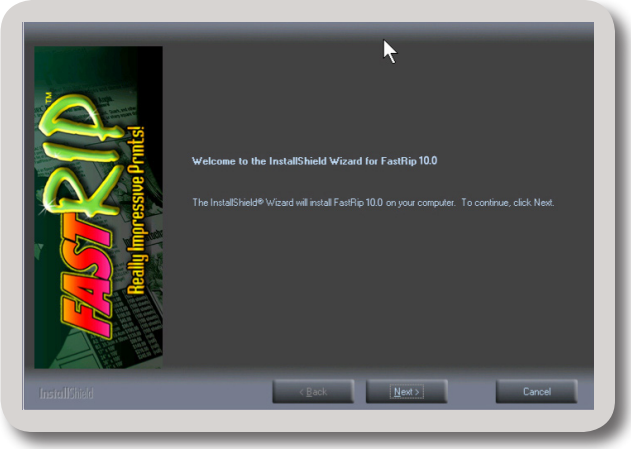
If your package included a Blue-colored dongle, then connect it as outlined at the end of the FastRIP Software installation.

Choosing a Language

The installation process will begin by querying your language preference. Choose the desired language and click OK.

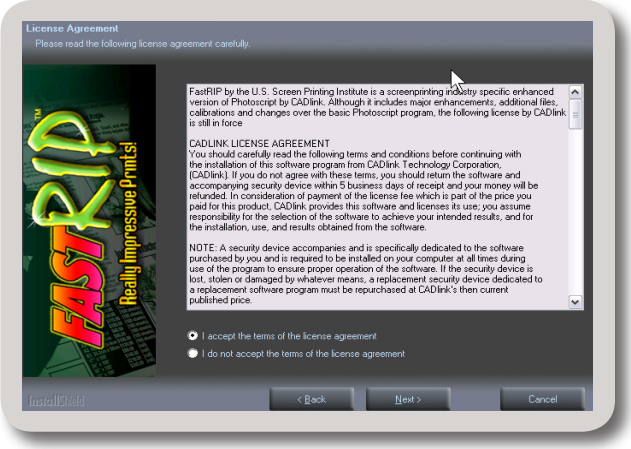
Installation Wizard

After selecting your language preference, the installation process will begin. When the install pauses at "Welcome to the InstallShield Wizard," click Next.


FastRIP
Really Impressive Prints!
Welcome to the InstallShield Wizard for FastRip 10.0
The InstallShield® Wizard will install FastRip 10.0 on your computer. To continue, click Next.
InstallShield
< Back
Next >
Cancel

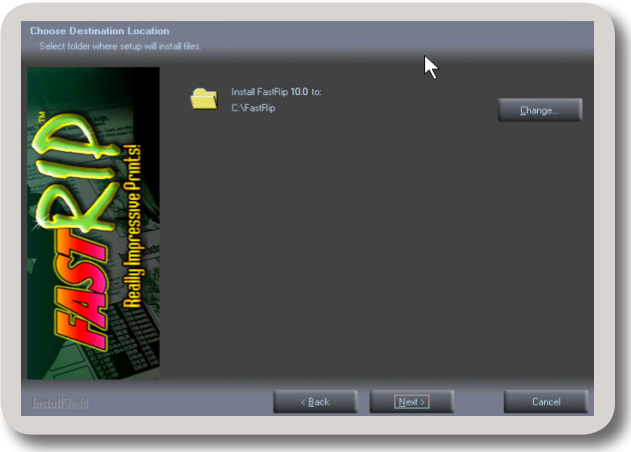
Licensing Agreement

Read the Licensing Agreement thoroughly prior to accepting the terms and conditions. Clicking Next implies acceptance of the agreement.


License Agreement
Please read the following license agreement carefully.
FastRip
Really Impressive Prints!
FastRIP by the U.S. Screen Printing Institute is a screenprinting industry specific enhanced version of Photoscript by CADlink. Although it includes major enhancements, additional files, calibrations and changes over the basic Photoscript program, the following license by CADlink is still in force
CADLINK LICENSE AGREEMENT
You should carefully read the following terms and conditions before continuing with the installation of this software program from CADlink Technology Corporation, (CADlink). If you do not agree with these terms, you should return the software and accompanying security device within 5 business days of receipt and your money will be refunded. In consideration of payment of the license fee which is part of the price you paid for this product, CADlink provides this software and licenses its use; you assume responsibility for the selection of the software to achieve your intended results, and for the installation, use, and results obtained from the software.
NOTE: A security device accompanies and is specifically dedicated to the software purchased by you and is required to be installed on your computer at all times during use of the program to ensure proper operation of the software. If the security device is lost, stolen or damaged by whatever means, a replacement security device dedicated to a replacement software program must be repurchased at CADlink's then current published price.
I accept the terms of the license agreement
I do not accept the terms of the license agreement
InstallShield
< Back
Next >
Cancel

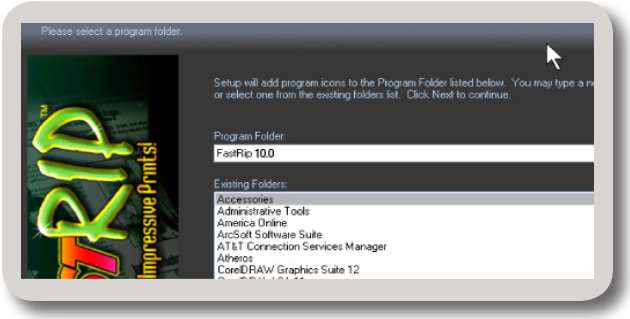
Choosing an Install Destination

Select the destination folder for FastRIP. This will be the central location where executable and workspace files will be kept. It is strongly recommended you do not change the default destination folder! If you are running any other devices that use Dongles or similar RIP technology, there might be Dongle or RIP conflicts if this destination is changed. When ready, click on the *Next* button.



Select a Program Folder

Choose a program folder location where FastRIP shortcuts will be placed. These shortcuts will become accessible through the Windows Start menu. This creates the program directory FastRIP 10.0 on the start menu.



Scanning for Resources

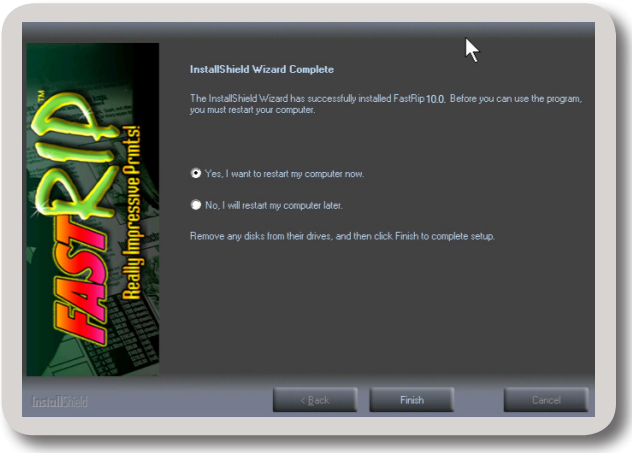
The installation program will scan the computer for available resources. It may take several moments for the installation to resume. You will then see the installation progress window.

Concluding the Installation

Once the installation is complete, FastRIP will ask if you want to re-boot your computer. Refer to the following sections that referring to your particular dongle type to conclude the install.

Parallel Dongle Installation

- If you will be using the **Parallel Port Dongle**, select "No, I will restart my computer later" and click Finish.
- Manually shut down your computer and turn OFF your printer.
- Insert the Parallel Port Dongle.
- After inserting your Dongle, turn ON the power to your printer and then reboot the computer.


InstallShield Wizard Complete
The InstallShield Wizard has successfully installed FastRip 10.0. Before you can use the program, you must restart your computer.
Yes, I want to restart my computer now.
No, I will restart my computer later.
Remove any disks from their drives, and then click Finish to complete setup.
FastRIP
Really Impressive Prints!
InstallShield
< Back
Finish
Cancel

USB Dongle Installation

- If you will be using the **USB Dongle**, select "Yes, I want to restart my computer now" from the on-screen menu.
- Click Finish. FastRIP will shut down the computer and automatically reboot it.
- Once the computer has rebooted and the Windows desktop has returned, insert your USB Dongle.

IMPORTANT POINT

In the event you have a bad Dongle or the Dongle driver was not installed correctly, a window will pop-up stating, "Dongle Error, Dongle not found or valid." This means the Dongle was not recognized by the computer. Verify that the Dongle's serial number matches the serial number from the **Product.icf** *file.*

Un-installing FastRIP

Should you need to un-install FastRIP from your computer, click on *Start* > *Control Panel* and locate the icon labeled *Add or Remove Programs*. *Double-click* on this icon and another window will open. Scroll through the listings until you see *FastRIP*. Click on the program to highlight and then click on the *Remove* button. In the FastRIP Setup window select *Remove* and click on *Next*.

Welcome
Modify, repair, or remove the program.
Welcome to the FastRIP Pro 10.0 Setup Maintenance program. This program lets you modify the current installation. Click one of the options below.
Modify
Select new program components to add or select currently installed components to remove.
Repair
Reinstall all program components installed by the previous setup.
Remove
Remove all installed components.
InstallShield
< Back
Next >
Cancel

The un-install process will remove most of the program components, however a folder MUST still be deleted from your hard drive. *Right-click* and *Explore* your *My Computer* icon on your desktop. *Double-click* on your C:\ drive and *double-click* on the folder labelled *Program Files*. *Right-click* on the *FastRIP* folder and select *Delete*. Delete the RIP driver by going into *Start* > *Settings* > *Printers and Faxes*. *Right-click* on *Epson Color Stylus *, Epson Photo Stylus *, or Epson Stylus Pro * Full/Sheet* and select *Delete*.

Re-installing FastRIP

If you are going to re-install the program you DO NOT need to un-install first.

- Simply place the CD back in the computer and allow it to run through a normal installation.
- Click on *Yes* when asked if you wish to install over the existing version of FastRIP.
- Click on *Ok* when asked if it's Ok to share the folder.
- Restart your computer.

NOTE: Whether you are using a USB or Parallel Dongle on the PC, you will not need to remove the Dongle during a re-installation of the software. Your computer already knows to recognize the Dongle from the previous installation.

CHAPTER 3

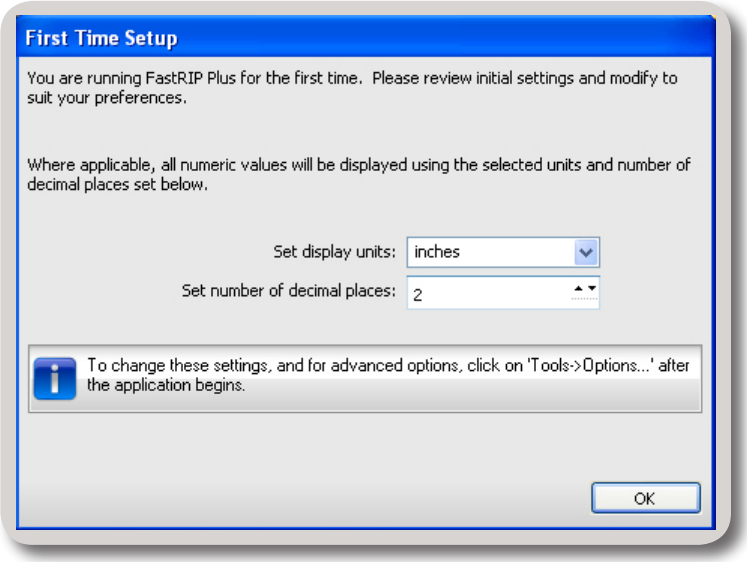
Setting Up FastRIP

Configuring Your Printer

After you have completed the basic installation, FastRIP is ready to run. However, prior to printing a job from a graphics program, you must configure FastRIP to work with your printer.

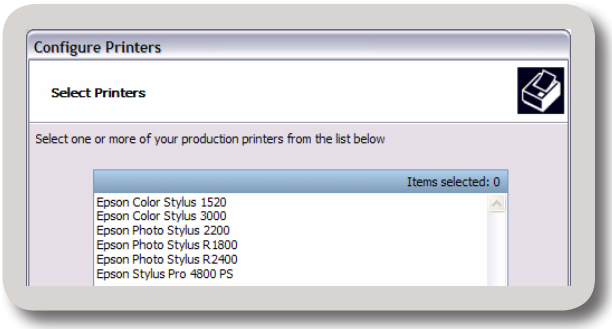
1. First Time Setup Dialog

The First Time Setup screen will appear letting you select your preferred measurements options.


First Time Setup
You are running FastRIP Plus for the first time. Please review initial settings and modify to suit your preferences.
Where applicable, all numeric values will be displayed using the selected units and number of decimal places set below.
Set display units:
inches
Set number of decimal places:
2
To change these settings, and for advanced options, click on 'Tools->Options...' after the application begins.
OK

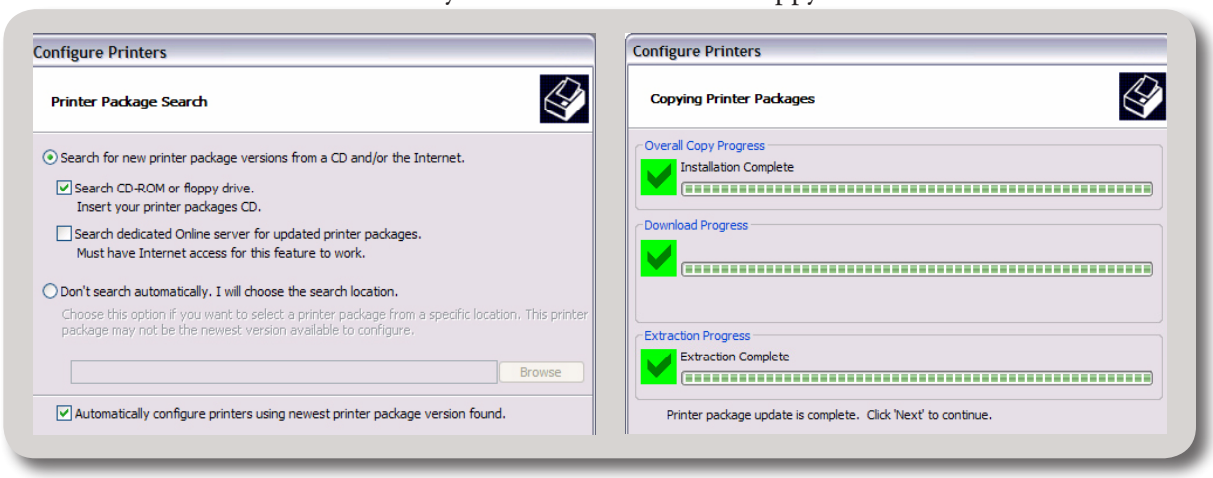
2. Printer Driver Selection

1. Go to *Start* > *Programs* > *FastRIP 10.0* and click on *FastRIP*.
2. A screen will prompt you to select a printer.
   - Highlight the printer drivers you wish to install and click on the *Next* button. You will only see the printers listed that work with the version of FastRIP you have purchased.


Configure Printers
Select Printers
Select one or more of your production printers from the list below
Items selected: 0
Epson Color Stylus 1520
Epson Color Stylus 3000
Epson Photo Stylus 2200
Epson Photo Stylus R1800
Epson Photo Stylus R2400
Epson Stylus Pro 4800 PS

NOTE: You may return to this screen at a later time to add additional printers.

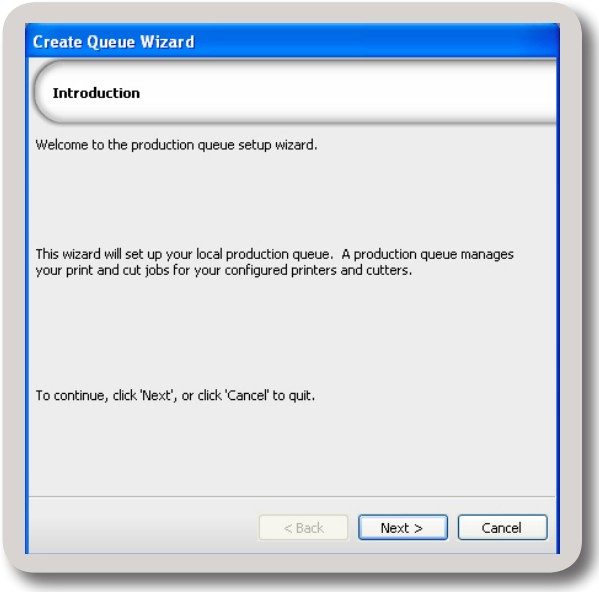
3. From the next screen, select the option "Search for new printer package versions from CD." Place a check mark by "Search CD-ROM or floppy drive."


Configure Printers
Printer Package Search
Search for new printer package versions from a CD and/or the Internet.
Search CD-ROM or floppy drive.
Insert your printer packages CD.
Search dedicated Online server for updated printer packages.
Must have Internet access for this feature to work.
Don't search automatically. I will choose the search location.
Choose this option if you want to select a printer package from a specific location. This printer package may not be the newest version available to configure.
Browse
Automatically configure printers using newest printer package version found.
Configure Printers
Copying Printer Packages
Overall Copy Progress
Installation Complete
Download Progress
Extraction Progress
Extraction Complete
Printer package update is complete. Click 'Next' to continue.

Click on *Next*. Click on *Next*. Click on *Finish*. When the "*Configuration Complete*" window appears, click on *Next*.

3. Create Queue Wizard Intro

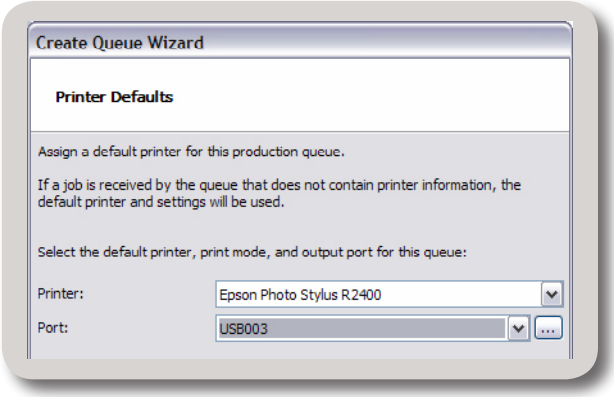
The next steps in the installation process will be completing the **Create Queue Wizard**. The Introduction window will open automatically.


Create Queue Wizard
Introduction
Welcome to the production queue setup wizard.
This wizard will set up your local production queue. A production queue manages your print and cut jobs for your configured printers and cutters.
To continue, click 'Next', or click 'Cancel' to quit.
< Back
Next >
Cancel

Click Next and follow the steps below.

4. Select a Printer Queue

The **Printer Defaults** window will now appear. This wizard will walk you through the process of configuring your printer port and other default printer options.


Create Queue Wizard
Printer Defaults
Assign a default printer for this production queue.
If a job is received by the queue that does not contain printer information, the default printer and settings will be used.
Select the default printer, print mode, and output port for this queue:
Printer:
Epson Photo Stylus R2400
Port:
USB003

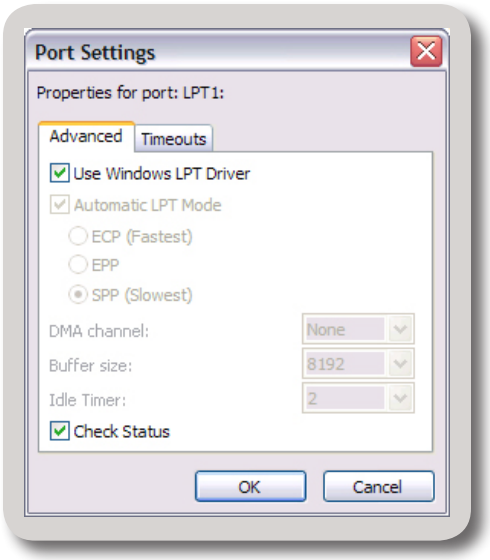
1. Select your printer and its output port.

   - The Output Port depends on the type of printer cable that is being used to connect the computer and your printer.

- The ports could be USB, LPT (Parallel), LPR (Ethernet) or the IP address of the printer (FireWire.)
- Click the ellipsis (...) button to the right of the Port drop-down list to open the Print Mode Selection dialog.

Note: If you are connecting your printer to your computer via USB cable, refer to Appendix A for details on how to find the correct USB Port.

2. A Port Setting window will open reading *"Properties for port:LPT1:*



An LPT Port (also known as a parallel port) is the most commonly-used printer port.

LPT Mode, also known as "Printer Port mode," determines the transmission rate of data sent to the printer. Although faster rates of transmitting data are preferable, the printer must be capable of sustaining the selected mode.

Faster data rates also increase the chances of transmission errors, so using a good quality IEEE 1284 cable is important.

- For the initial installation, leave the port's Properties settings at the *Default*. If "gaps and lines" start to appear in the output, the LPT mode may have been set too high, preventing the printer from receiving data consistently. Should you need to change the LPT Mode, the following section briefly describes the available modes.

5. Set LPT Parameter (Optional)

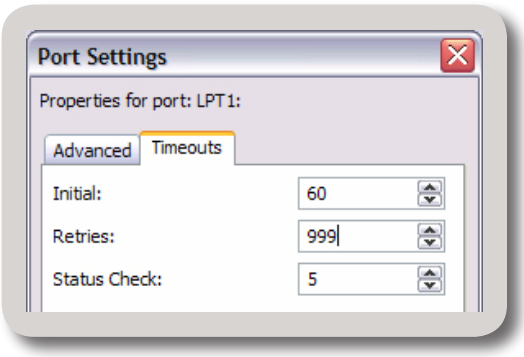
The following is a list of LPT settings that can change how your computer sends the data through FastRIP and to the printer. We recommend leaving the settings in the Port Settings Dialog as default, however, they can be adjusted for certain needs or concerns. These settings can be accessed in the *Port Settings* > *Advanced* screen.

- ***LPT Mode SPP, Normal, or Compatible***
  These modes are synonymous and refer to the same setting. In this mode, data from the computer to the printer is transmitted at the slowest rate possible. In this mode there are very few errors however, printing time will also be at its longest. If your printer can not operate without errors in any of the faster modes, you will have to use this mode.

- ***LPT Mode EPP***
  This is the mid-range speed setting. It is not often used, but may be a good compromise between ECP and SPP modes.
- ***LPT Mode ECP***
  In this mode, data is sent to the printer at the fastest possible rate. Generally most printers can support this speed, but if your prints show errors, your printer may not be capable of this mode.
- ***Automatic***
  If the Automatic option is enabled, FastRIP Queue will attempt to determine the fastest possible mode for sending data to the printer. FastRIP Queue will test for ECP (fastest rate) capability first, followed by EPP (mid-range rate), and then SPP (slowest rate).
- ***LPT 2 or LPT 3***
  If your printer is connected to LPT 2 or LPT 3 choose the Windows LPT Driver.

Note: A specific data rate may be "forced" for a specific job by disabling the Automatic option. When you start a new job, FastRIP will automatically perform its checks again prior to delivering the new output.

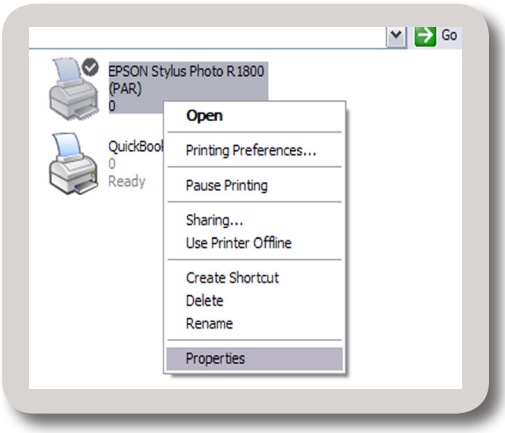
6. Set Timeout Options



While still in the *Port Settings* Window, select the ***Timouts*** Tab. The *Timeouts* Tab allows you to tell FastRIP what to do in the event of "*Time Out*" error. This error most often occurs when printing a large file and is the result of an interrupted data stream.

- Set the Retries to 999 and the Initial to 60.

7. Print A Test Page



It is recommended that you print a test page to make sure that your computer is properly communicating with your printer. For more Test Page printing options, refer to ***Chapter 10 - FastRIP Print Options -Printing a Test Page***.

1. To do this, click on *Start* > *Settings* > *Printers and Faxes*.
2. In the window the pops up, find your Epson Printer and *right-click* on it.

3. Under the *Properties* tab, click on the button labeled "Print a Test Page."

If the test page does not print, or does not print correctly, refer to the following step in looking up your connection type and for instructions on settings/ports.

8. Set the Connection Parameters

If your printer completed a positive test print, skip this step and continue with ***Step 9***.

The following sections will cover setting the parameters to correct or initially setup your connection properly. Refer to your particular connection to learn about the needed settings and adjustments necessary.

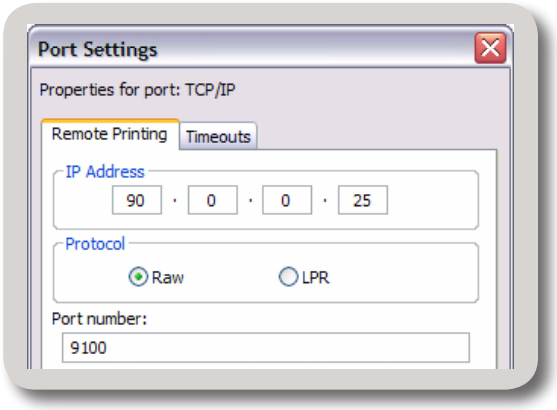
USB Parameters

Most printers that support USB connections are known as "Plug and Play." This terminology means that after the printer drivers have been installed, Windows will automatically recognize your printer and to which USB port it's connected.

Ethernet cable TCP/IP Parameters

To use the *TCP/IP* port option, consult your system administrator to determine the *Host Address* and *Print Server Queue Name*.

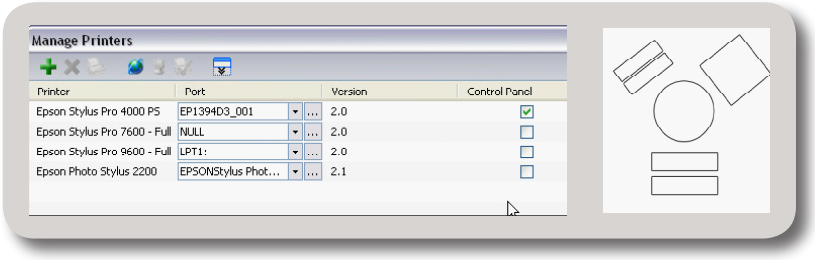
The *TCP/IP* port option is used to send print jobs across a *TCP/IP* network to a network *IP* address (the Host Address). This *Host Address* represents the location of a printer server on the network.



FireWire Port Parameters

FireWire is a term used by Apple Computers for their IEEE 1394 Standard, which calls for a high performance serial bus to connect peripherals to your computer. This standard has also been implemented under other commercial names, such as iLink from Sony Corporation. Additionally, it is sometimes referred to generically as IEEE 1394.

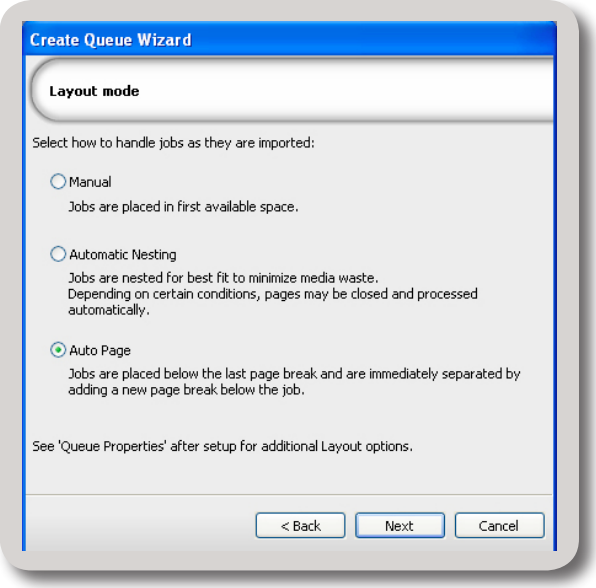
To use your printer with FastRIP and FireWire, select the FireWire Port called EP1394D3_00*



9. Layout Mode

The **Layout Mode** window lets you select how to handle jobs as they are imported.

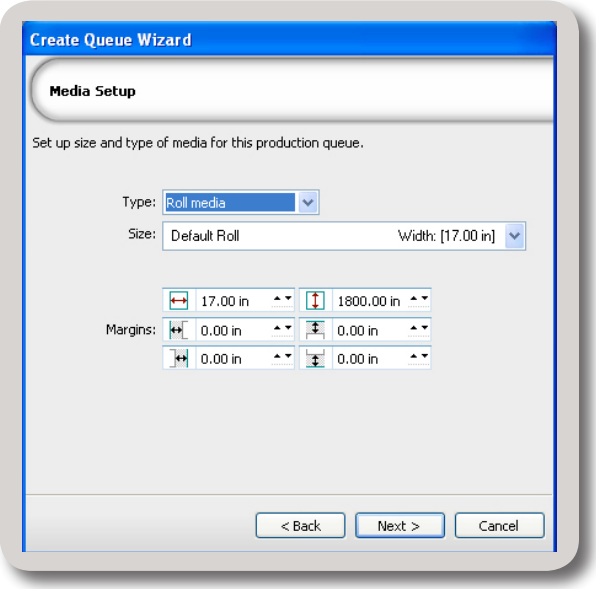
When finished, click Next.


Create Queue Wizard
Layout mode
Select how to handle jobs as they are imported:
Manual
Jobs are placed in first available space.
Automatic Nesting
Jobs are nested for best fit to minimize media waste.
Depending on certain conditions, pages may be closed and processed automatically.
Auto Page
Jobs are placed below the last page break and are immediately separated by adding a new page break below the job.
See 'Queue Properties' after setup for additional Layout options.
< Back
Next
Cancel

10. Media Setup

The **Media Setup** window allows you to control the default setting of media used and size of media.

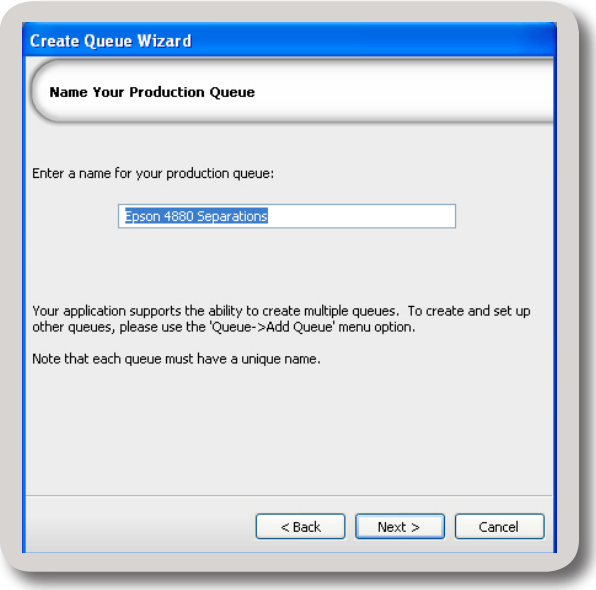
When finished, click Next.



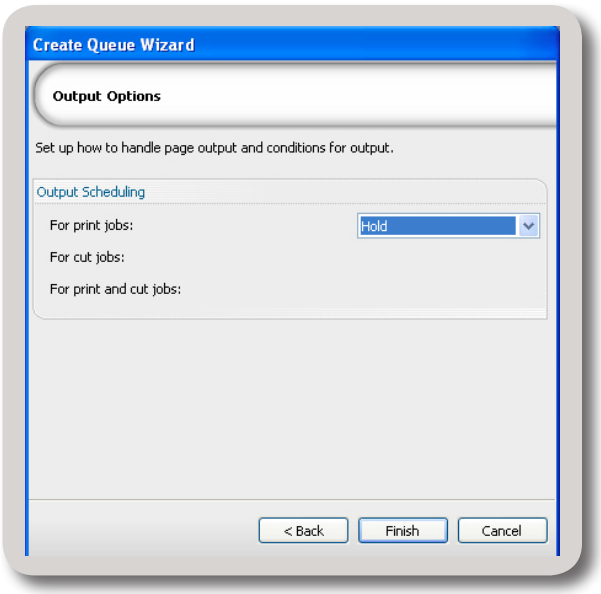
11. Name Your Production Queue

The **Name Your Production Queue** window lets you assign any given name to the Queue you just created.

Click Next, when finished.


Create Queue Wizard
Name Your Production Queue
Enter a name for your production queue:
Epson 4880 Separations
Your application supports the ability to create multiple queues. To create and set up other queues, please use the 'Queue->Add Queue' menu option.
Note that each queue must have a unique name.
< Back
Next >
Cancel

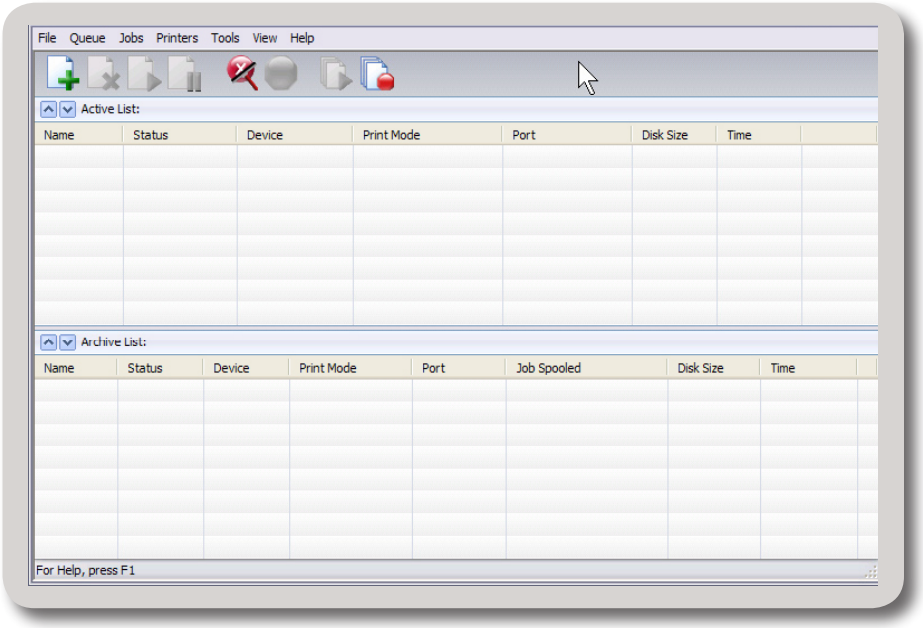
12. Output Options



The last window in the Creat Queue Wizard is the Output Options window. This lets you set the default printing options for jobs that have been sent to the RIP Queue for printing.

When finished, click Finish.

13. Add Printer to Queue Window


File Queue Jobs Printers Tools View Help
Active List:
Name Status Device Print Mode Port Disk Size Time
Archive List:
Name Status Device Print Mode Port Job Spooled Disk Size Time
For Help, press F1

The FastRIP Program Screen or "Queue"- window should have opened. This is the same window you will see when the image processor is working. There are a lot of options that can be accessed from this screen, but for now, are only concerned with the Manage Printers screen.

1. From the ***Printers Pull-down Menu***, select ***Manage Printers***. This window will list all printers connected to your computer.

2. Locate your Epson printer and place a check in the Control Panel column. Click on *Ok*. This will add the printer to the Printers Window.

NOTE FOR EPSON 7600 AND 9600: With FastRIP XL and FastRIP LF, you will see listings for Epson Stylus Pro * Full and Epson Stylus Pro * Sheet. The "Full" is for roll film and the "Sheet" is for sheet fed film. You should check both drivers.

Two EPSON Drivers....

When you choose the Epson printer driver during installation, FastRIP creates a new "Postscript" driver for the printer. The new driver is actually a FastRIP tool that tells FastRIP to rasterize the image before sending it to the printer. This new driver is called Epson Stylus Pro 4000 PS, Epson Stylus Pro 4800 PS, Epson Stylus Pro 7800 (FastRIP XL) or Epson Stylus Pro 9800 (FastRIP LF). The standard Epson driver is called EPSON Stylus Photo *, EPSON Stylus Pro *, or EPSON Stylus Color *. These ARE NOT the same drivers. It is very important to remember which driver to use with FastRIP.

Also, the FastRIP High Speed Driver will look like Epson 4800 Separations.

To see the various printer drivers on your system, go to the Start Button on the Windows Taskbar. Click on *Settings* > *Printers* or *Control Panel* > *Printers and Faxes* and you will see this window.

IMPORTANT POINT

If you right click on the "new" FastRIP print driver and select Properties, you will notice under the Port tab in Printer Properties that this "driver" prints to a port called FastRIP Demo 9.0: My Queue (PhotoScript Port), and NOT your standard LPT, USB, FireWire, or Ethernet port.*

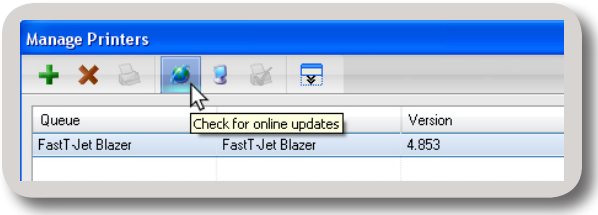
Printer Updates

Getting the latest updates for your printer

To obtain the latest print modes for your printer:

1) Ensure your Internet connection is active.

2) From the **Printers** menu, choose **Manage Printers**. The **Manage Printers** dialog will open.



3) Click the printer name that will be checked.

4) Click the **Check for online updates** button. If updated print modes are available, then the **Update printers** button will become available.

5) Click the **Update printers** button to update the print modes.

Port Selection

Output Port

1) From the **Printers** menu, choose **Manage Printers**.
2) The **Manage Printers** dialog will open.
3) For the given printer, the **Port** column indicates the output port.
4) To change the port, choose a port from the drop-list.
5) To change the port settings, click the ellipsis button (three dots) that is to the right of the drop-list.

Of the various port settings described in the following sections, the USB Port is recommended for output from FastRIP. Other port methods are described in the electronic help file.

USB Port

This is the recommended output port to use with FastRIP.

A Universal Serial Bus (USB) port has the benefit of allowing new hardware to be added without configuration concerns or hardware conflicts. In addition, a USB device may be added without requiring the workstation to be restarted.

1. When the Epson printer is connected to the computer via its USB port, Windows will automatically detect the USB printer.
2. In FastRIP, the USB port name for this printer should now be available.
3. From the **Printers** menu, choose **Manage Printers**.
4. The **Manage Printers** dialog will open.
5. From the **Port** column drop-list, choose the USB port that is named specifically for your Epson model. **Example:** For the Epson 4800, the USB port will be listed as "**EpsonStylus Pro 4800_USB00X+port name**."

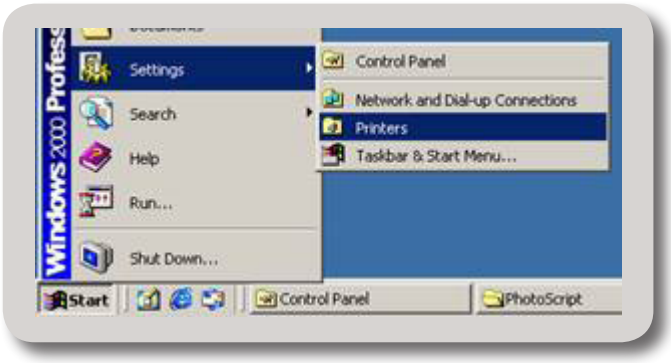
Note: Depending upon advanced settings within FastRIP, it is possible that there is a secondary "USB00X" port (or "LPTUSB1" in the case of Belkin Adapters) that is available. Do not choose either of these secondary ports, unless requested to do so by Tech Support.

Printer Sharing on Windows 2000 and XP

Setting up the Host Computer

On a Host Windows 2000 computer, setting up printer sharing is done through the Sharing tab of the printer driver properties. The procedure for Windows XP is similar.

1. From the Start menu, Settings, choose Printers.



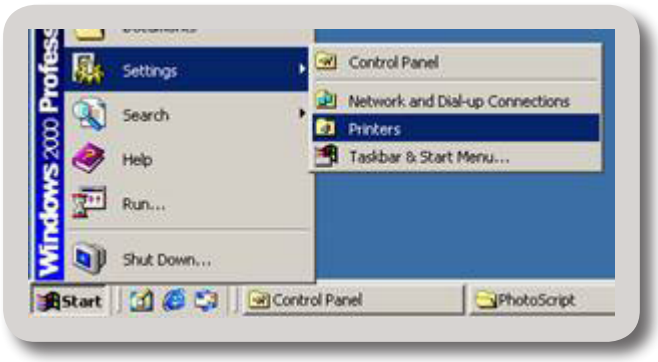
2. The Printer dialog will open. Right-click the icon of the printer to be shared. A context menu will appear.

3. From the context menu, choose the Properties option. The Properties dialog for the printer will open.
4. Select the Sharing tab.
5. On the Sharing tab, choose Shared and enter a name for the printer in the field.
6. Click OK to accept the new settings.

Setting up the Remote Computer

Assuming that the Host Windows 2000 computer has been set up to share its connected printer over the network, Remote Windows 2000 computers may use the following procedure to add that printer as a resource. The procedure for Windows XP is similar.

1. From the Start menu, Settings, choose Printers.



2. The Printers dialog will open.
3. Double-click the Add Printer icon. The Add Printer Wizard will launch.
4. Click Next. The location of the printer must now be selected.
5. Choose Network printer, and click Next.
6. Windows 2000 will now compile a list of the printers that are available on the network.
7. Choose the printer that is connected to the Host computer, and then click Next to complete the Add Printer sequence.

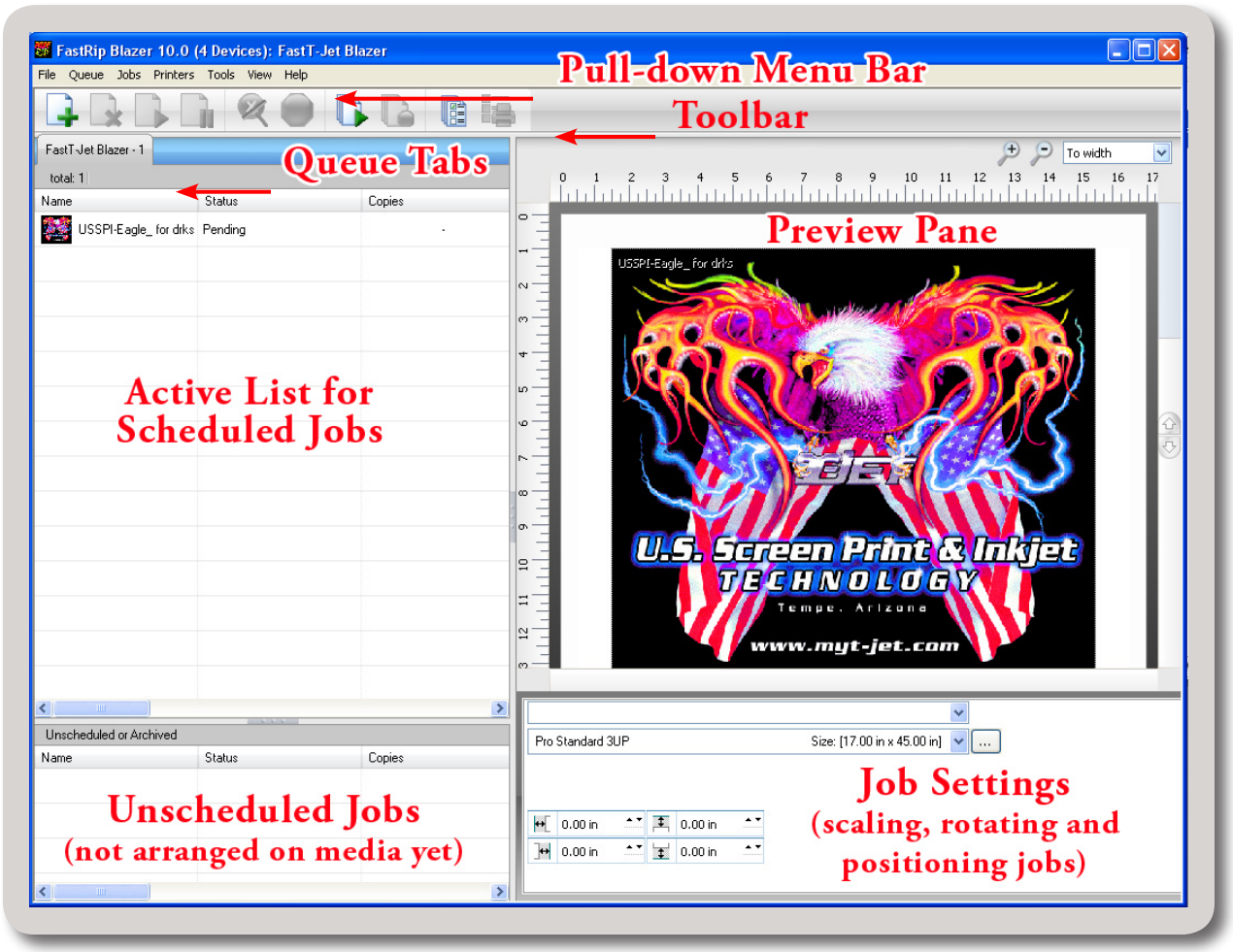
CHAPTER 4

Toolbars and Menus

Overview of FastRIP Interface

The following sections will cover the Main Window elements of FastRIP 10.0 such as the Pull-down Menus and Toolbar buttons. For further information on these tools and settings, refer to the following chapters.

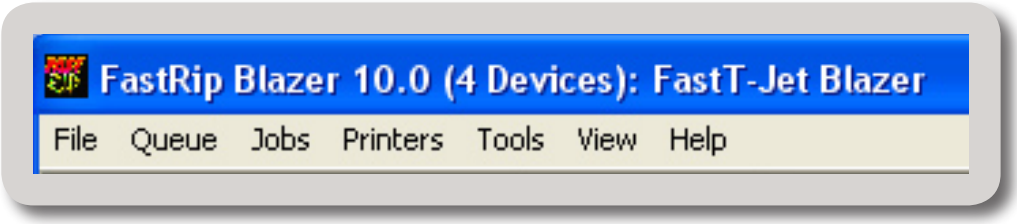
The main elements of the FastRIP window are:



JOBS IN THE ACTIVE LIST ARE POSITIONED IN THE PREVIEW PANE. SELECTING A JOB PROVIDES ADDITIONAL CONTROLS FOR MODIFYING ITS LAYOUT.

The Pull-down Menu Bar

The Pull-down Menus, also referred to as drop-down menus, provide the main FastRIP controls.



- The **Queue** menu provides controls for adjusting FastRIP parameters.
- The **Jobs** menu provides controls for adjusting selected print jobs.
- The **Printers** menu provides management for printers.
- The **Tools** menu provides access to advanced RIP settings.

Queue Pull-down Menu

When print jobs are received by FastRIP, they are added to the queue of active jobs. The **Queue** menu contains basic controls for starting, stopping, and scheduling of print jobs.

- **Manage Queues** – Create a queue, or change the port or printer of an existing queue.
- **Start** – Process jobs as they are received in queue. Scheduling settings apply to received jobs.
- **Stop** – Hold all jobs in queue, regardless of Scheduling settings.
- **Clear Job Errors** – Reset any errors that were reported, such as paper out.
- **Properties** – Open the **Queue Properties** dialog.

Jobs Pull-down Menu

The **Jobs** menu contains controls for printing, previewing and deleting print jobs.

- **Restore jobs** – Manage archived print jobs.
- **Select all** – Selects all jobs in queue.
- **Select none** – Clear current selection.
- **Remove** – Delete the selected job.

- **Rename** – change the job name.
- **Open Page** – discard the spool data, such that individual jobs can be scaled, rotated, etc.
- **Locate Job** – find the job in the Preview Pane
- **Release** – release a held job
- **Hold** – stop the job, regardless of whether queue is stopped
- **Abort** – cancel the print job
- **Clear error** – reset any errors that were reported, such as paper out
- **Add to Layout** – move an unscheduled job into the active list, and show in Preview Pane
- **Print** – send job to the printer
- **RIP Only (Preview)** – spool the print data without sending to printer. Once spooled, the print data can be previewed
- **Generate Preview Image** – if thumbnails have been turned off, then create a preview
- **Properties** – open the **Job Properties** dialog
- **Show log console** – when printing a job, open a log window. Same as **Jobs** menu >> **Properties** >> **Log** tab

Printers Pull-down Menu

The **Printers** menu contains controls for managing printers, print modes, and page sizes.

- **Manage Printers** – Open the **Manage Printers** dialog, which is used to add support files for new printers, and check for support file updates.
- **Manage Print Modes** – Copy and edit print modes for a given printer.
- **Manage Print Media** – Define media dimensions in terms of sheets, rolls, and templates.
- **Printer Properties** – List printer settings.
- **Print Test Page** – Choose target charts for testing the printer output.

Tools Pull-down Menu

From the **Tools** Pull-down menu, choose **Options** to open the **Options** dialog. The available tabs are as follows:

- **General** – Basic controls for customizing the FastRIP interface.
- **Queue Base Folder** – The location of Queue production files.
- **RIP** – Allocate memory for the RIP, and set the relative priority of jobs with respect to other Windows applications.
- **Processing** – Spool extra jobs whilst waiting for the current print job to finish.
- **Preview Options** – Adjust the thumbnail image that is displayed next to each job name in the queue.

Main Toolbar

The *Main Toolbar*, just below the Pull-down Menus, provide basic (Start / Stop) controls.

Below is the list, from left to right, of the 10 buttons in the Toolbar and what they do.

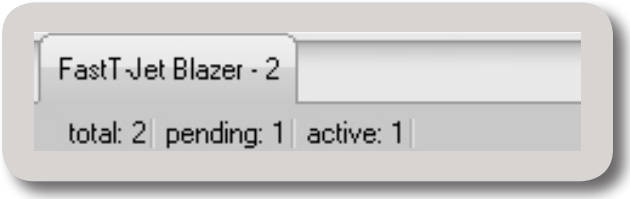
- **Open:** This is the first icon in the list. The Open Icon lets you import a new job into the Queue list (shortcut of File>Import).
- **Remove:** By pressing the *Remove* button, all of the jobs that are currently selected (highlighted) in the Queue Window or Archived window will be removed. You cannot undo a remove command.
- **Release Job:**
- **Hold Job:**
- **Clear Errors:**
- **Abort Job:** Lets you cancel a job from spooling or printing.
- **Start Queue:** By clicking the *Start Queue* button, all jobs will be processed according to the scheduling settings within the queue properties.
- **Stop Queue:** The *Stop Queue* button will cause all jobs to be held, regardless of the scheduling settings within the queue properties

- **Configure Queue:** Lets you setup and configure queue settings to a job that is currently in the queue list (shortcut for Queue>Properties Pull-down Menu selection).
- **Printer Status and Settings:** This button will allow you to adjust printer settings and to view the current status of the printer.

NOTE: The ***Toolbar Icons*** that are grayed out, are not currently available with the current selection or situation.

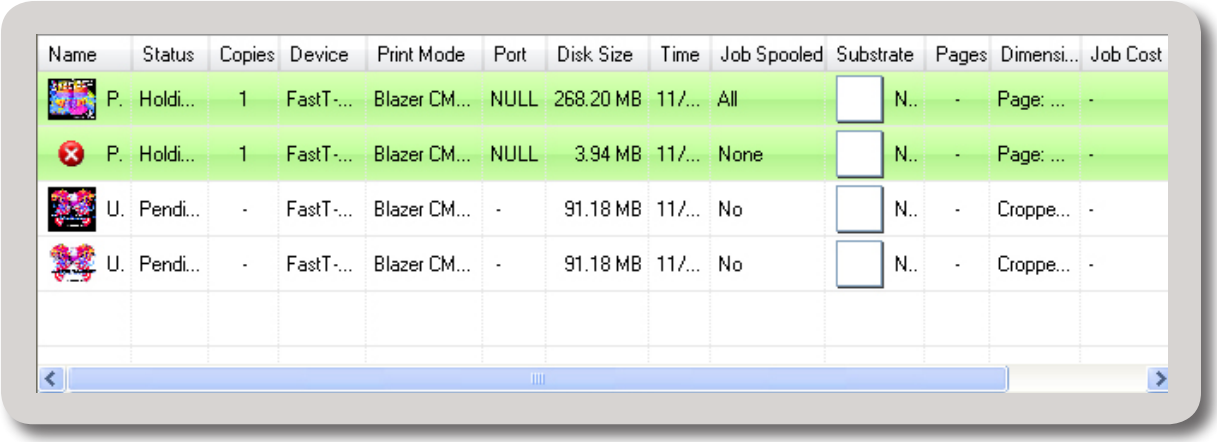
Queue Tabs

Select between printers using the *Queue Tabs* located below the *Main Toolbar*. Each tab will display the printer title that is associated with it and the number of current/holding jobs located in it's *Active List*.



Active List

In this section of the RIP Window you can view each job that has been imported into FastRIP and control its current status or settings. If you wanted to adjust an imported job or cancel a function, highlight the job in the Active List, then select either a function from the main Toolbar or right click on the job for other options. Jobs can be dragged here for storage or dragged back to the Active List for printing.


Name Status Copies Device Print Mode Port Disk Size Time Job Spooled Substrate Pages Dimensi... Job Cost
P. Holdi... 1 FastT-... Blazer CM... NULL 268.20 MB 11/... All N.. - Page: ... -
P. Holdi... 1 FastT-... Blazer CM... NULL 3.94 MB 11/... None N.. - Page: ... -
U. Pendi... - FastT-... Blazer CM... - 91.18 MB 11/... No N.. - Croppe... -
U. Pendi... - FastT-... Blazer CM... - 91.18 MB 11/... No N.. - Croppe... -

At the top of the Active List is a section title showing particular information about the job; everything from the Job Name to the Job Cost is listed here. By right-clicking on any of these titles, you can specify which ones or present. In this example all options are present. Each line between the titles can be dragged to expand the information under that title. The scroll bar at the bottom of the window lets you view the information of the job when expanded.

Unscheduled or Archived Jobs

After a job has been printed, it will show up in the Unscheduled or Archived Jobs area of the RIP Window.

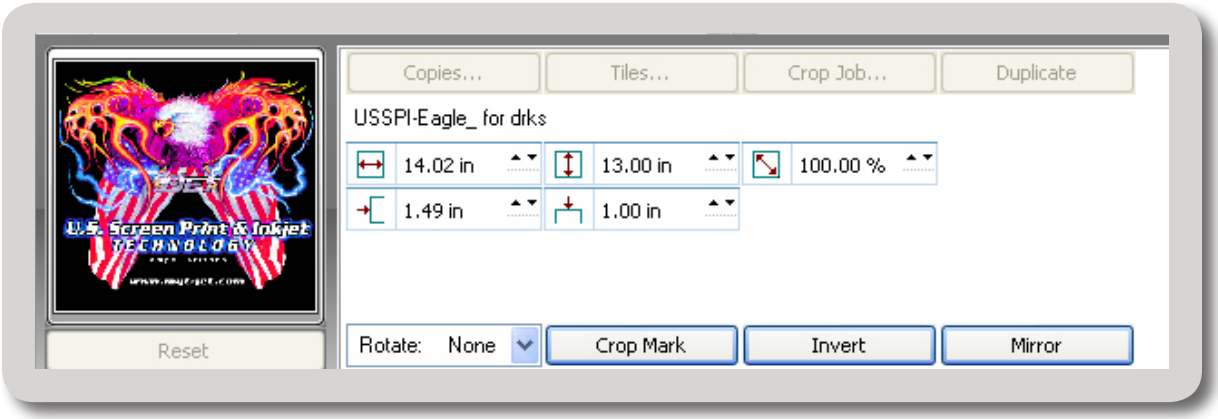
Preview Pane

Here you will see the placement of the job to be printed or printed job in relation to the page layout or template that have loaded for that job.

Located in the Preview Pane is a Zoom tool that lets you zoom in and out of the page layout. It also features page control arrows and scroll bar as well as a ruler specifying the art in relation to the unit measurements selected.

Job Settings

Here you can specify (adjust) the size and position of your artwork in relation to the page. You can also adjust the page layout and template specifications as well.



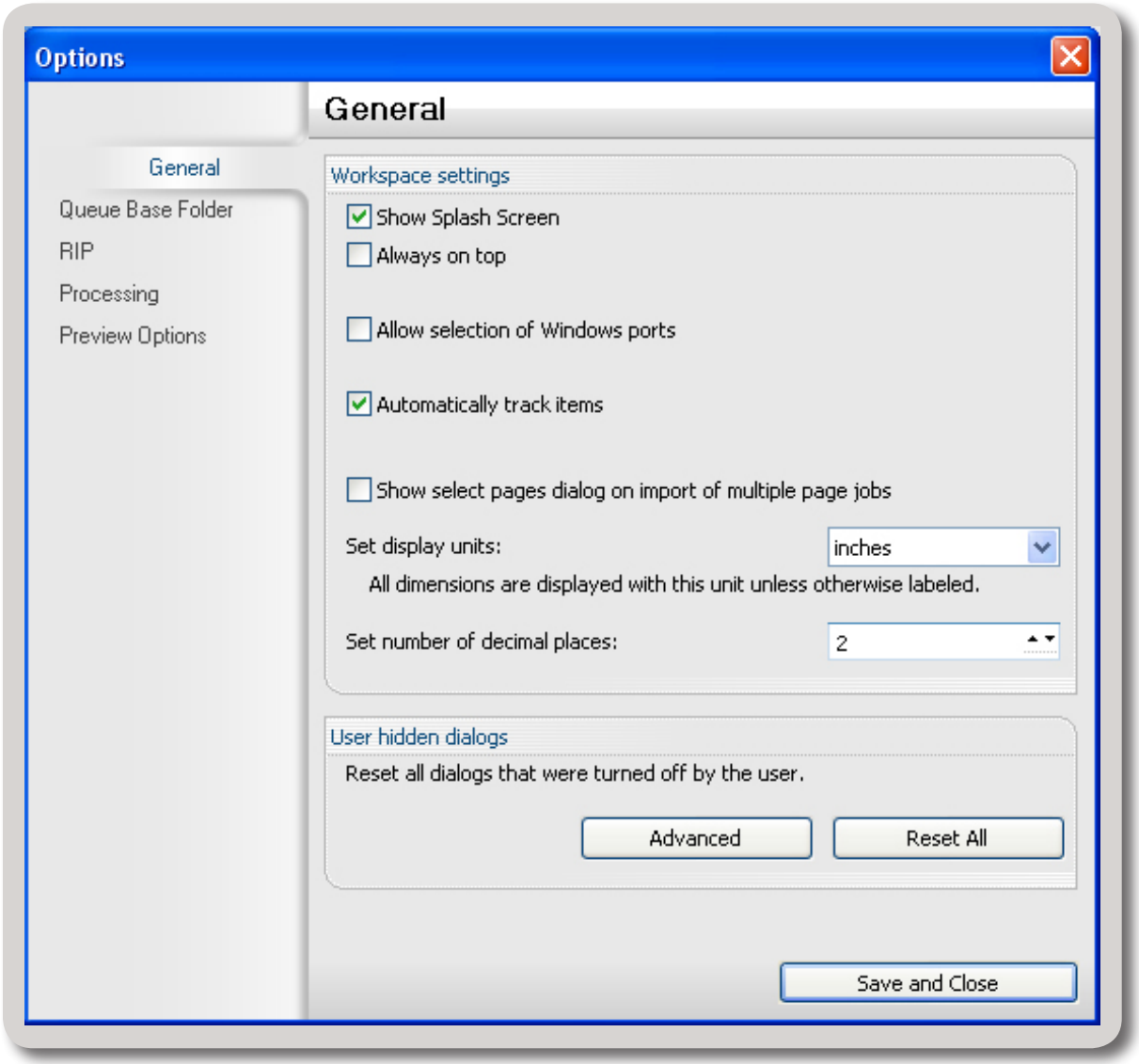
CHAPTER 5

Program Settings

General Interface Settings

From the Tools Pull-down Menu, choose Options and then click the General tab.

The ***General*** tab provides basic controls for customizing the FastRIP Window:



Show splash screen

When launching the FastRIP Window, this checkbox controls whether the FastRIP Window splash screen will be displayed.

Always on top

If this checkbox is ticked (ON), then the FastRIP Window window will always remain in the foreground "above" other windows.

Show advanced settings

Tick this checkbox (ON) to enable advanced control tabs in both the Queue Properties dialog, and Job Ticket Properties dialog.

Automatically track items

If this checkbox is ticked (ON), then selecting a job in the active list or archive list will display details about that job in the Media Settings pane. When OFF, it is necessary to select a job in the Preview Pane in order to display such details.

Process multiple page jobs as overlay

When this checkbox is ticked (ON), received jobs that contains multiple pages will be automatically placed above each other in the Preview Pane.

Select pages when importing multiple page job

Choose pages when importing a multiple page job. For example, if a multiple page PDF document is received, then the Page Manager will provide options for previewing and selecting which pages to import.

Set display unit

Choose the unit of measurement that will be used throughout the FastRIP Window.

Set decimal places

Choose the precision of measurements used in FastRIP Window.

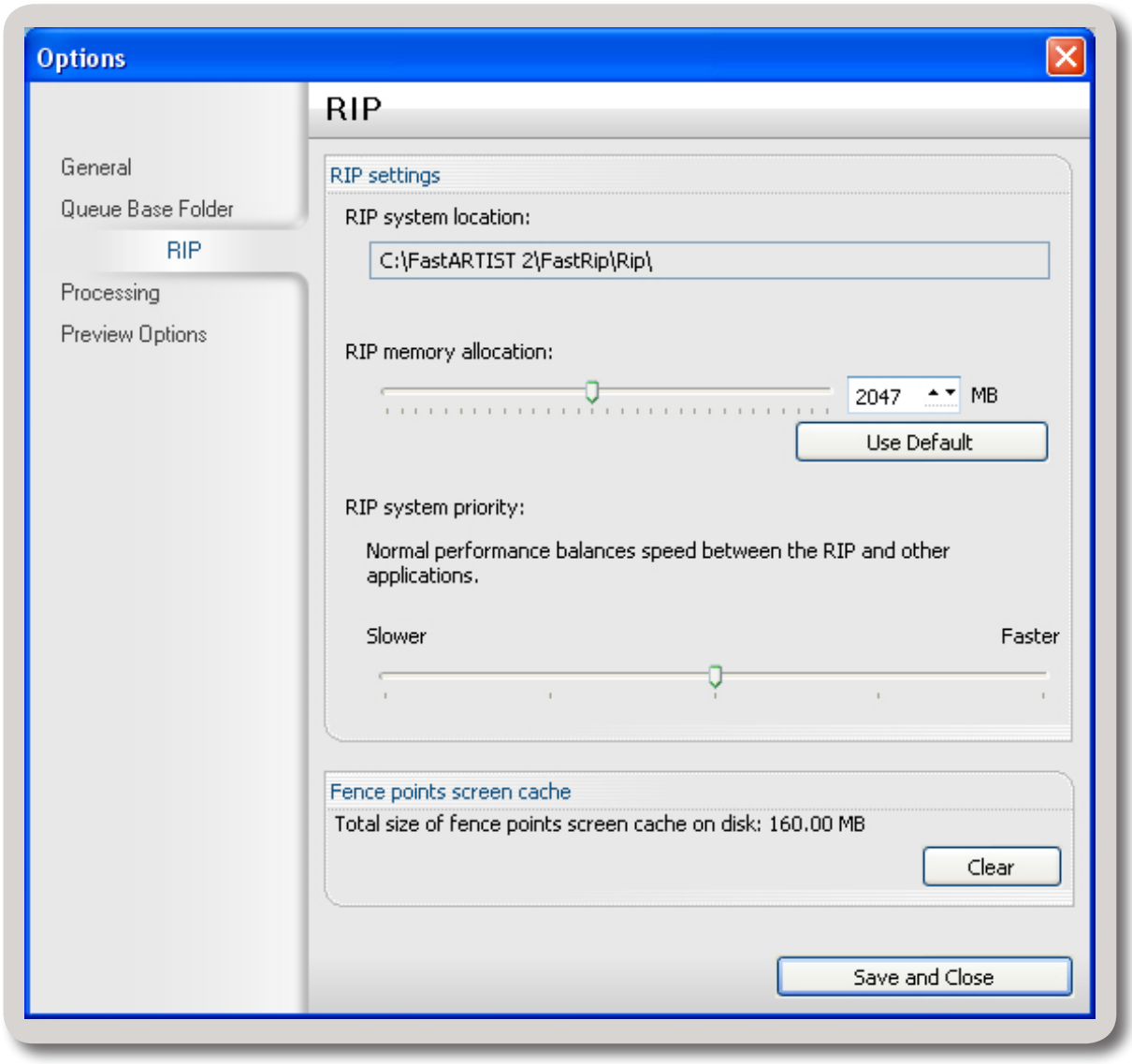
Reset hidden dialogs

The FastRIP Window uses warning dialogs to confirm whether a given action should proceed. Such warning dialogs have a checkbox that can be checked to prevent that warning dialog from reoccurring. However, if there is a new user that is learning how to use the FastRIP Window, then click the Reset All button to force all dialogs to be shown again. Alternatively, click Advanced to select which warning dialogs to show.

RIP System Settings

From the Tools menu, choose Options and then click the RIP tab.

The RIP Settings are used to specify the resources that are available for spooling (rasterizing or RIP'ing) print jobs. These controls will directly influence the workstation that is performing the RIP calculations.



RIP System Location

The RIP System Folder field explicitly states the directory to which the FastRIP Window RIP has been installed. This information is provided to help CADlink Tech Support diagnose issues quickly.

RIP Memory Allocation

Memory refers to the maximum amount of workstation memory (RAM) that may be used by the queue when creating a spool file. If more than this limit is required, then Virtual Memory (VM) will be used. Virtual Memory refers to hard drive space that is used to supplement RAM. Virtual Memory is used to effectively provide applications with more RAM than the workstation has installed. However, accessing hard drive space is much slower than real memory.

RIP Priority Level

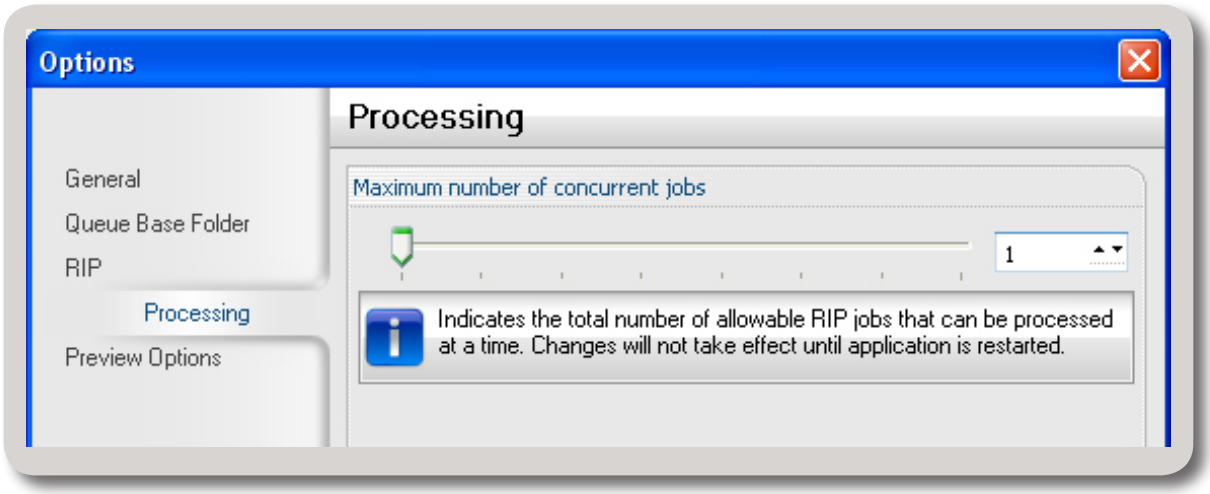
All software processes have a Priority Level that determines how the workstation processing time is shared amongst the processes (different software applications). Normally, processes are assigned equal priority levels by default, but modifying the priority of individual processes is acceptable where this improves overall workstation performance.

If the RIP Priority Level is increased, then print jobs will be processed faster, though this will be to the detriment of all other software processes that are running on the workstation. Other processes will simply require more time in order to complete their operations.

Conversely, if the RIP Priority Level is decreased, then print jobs will require more time to complete.

Processing Settings

From the Tools menu, choose Options and then click the Processing tab.


Options
Processing
General
Queue Base Folder
RIP
Processing
Preview Options
Maximum number of concurrent jobs
1
Indicates the total number of allowable RIP jobs that can be processed at a time. Changes will not take effect until application is restarted.

Concurrent RIP Operations

Though the queue can spool a print job quickly, there is still time required to send the spool data to the printer (say over a network). In addition, the printer has a physical limit with respect to how quickly ink can be laid upon the media.

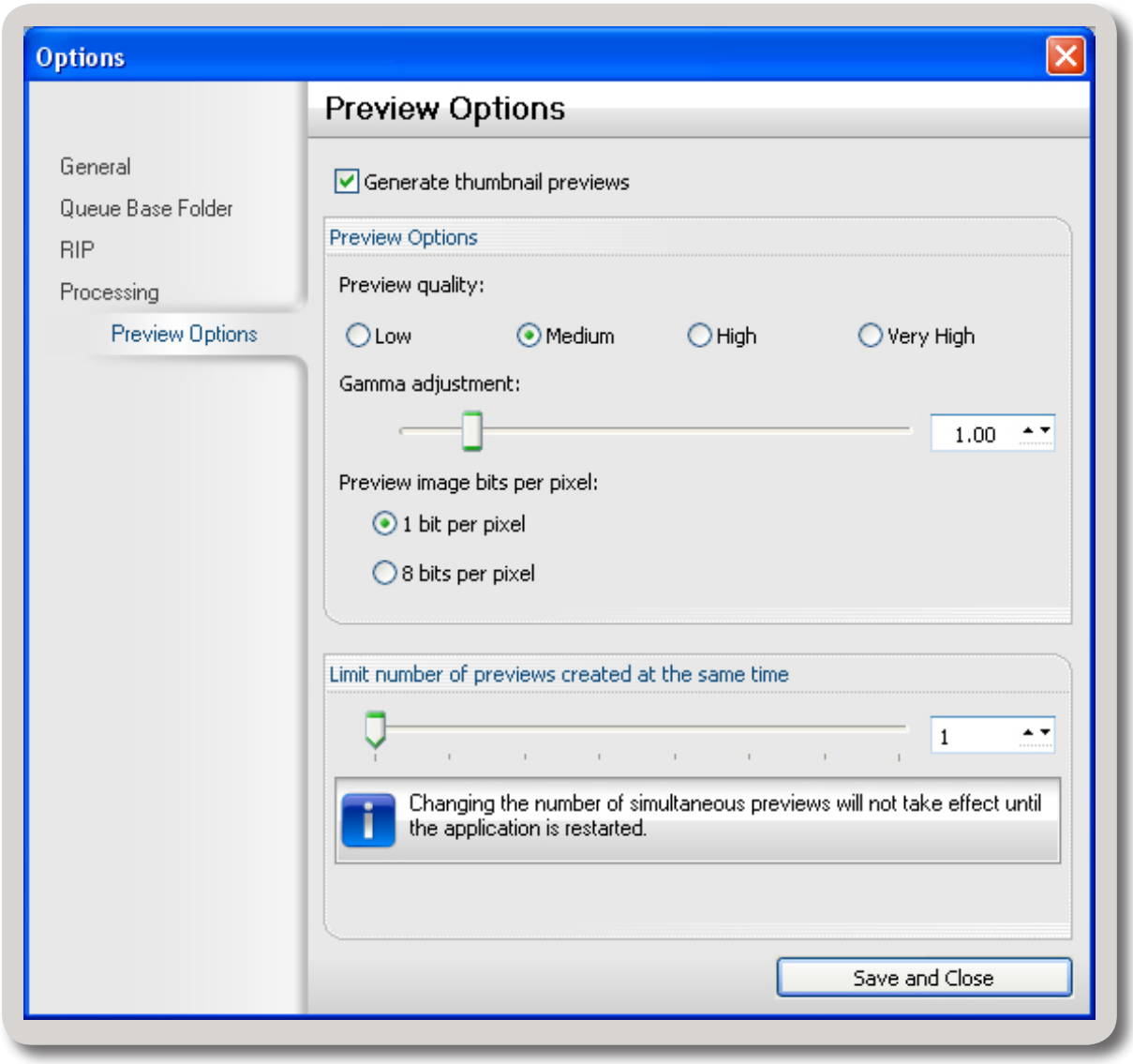
Instead of waiting idle for a spool file to be completely received by the printer, the queue can

begin creating spool files for subsequent print jobs concurrently. However, please note that only one spool file is being compiled at any given time. The Maximum number of concurrent RIPs limits the number of spool files that can be compiled in advance of the job that is currently being spooled.

Preview Options

From the Tools menu, choose Options and then click the Preview Options tab.

By default, when a new job is received by the FastRIP Window, its name is listed in the Active List of jobs, a thumbnail image of the job is shown next to its name, and a thumbnail preview of the job is shown in the Preview Pane. Typically, these thumbnail previews are of medium quality, though the preview quality can be increased using the Preview Options.



Generate thumbnail previews

Clearing this checkbox (OFF) will prevent thumbnail previews from being automatically created. However, previews can be manually created by right-clicking the given job and choosing Jobs menu >> Generate Preview Image.

Preview quality

Adjusts the screen resolution of the generated preview. Higher quality will require the greatest amount of time in generating the preview.

Gamma adjustment

Adjusts the relative brightness of the generated preview.

Preview image bits per pixel

Limits the number of color shades that can be assigned to a given pixel. Choosing 1 bit per pixel will create preview colors that appear blotchy.

Limit number of previews

By default, when multiple jobs are received at the same time, thumbnail previews will be methodically generated one-by-one. Use the slider to increase the number of previews that are generated in parallel.

Advanced RIP Settings

Performance

From the **Queue** menu, choose **Properties** and click the **Performance** tab.

For most cases, the Resolution Reduction slider should be OFF. The Resolution Reduction slider is used to reduce the resolution of the data being spooled, thereby reducing the size of the required spool data. For text and line art, it is likely that half of the resolution data can be discarded without impacting the appearance of the printed output.

However, avoid reducing the resolution with images (i.e., gradients that utilize halftones), since the quality can deteriorate quickly.

If the **Intelligent Resolution Reduction** checkbox is ticked, then the Resolution Reduction feature will be applied automatically using a sophisticated set of criteria.

CHAPTER 6

Page Layout

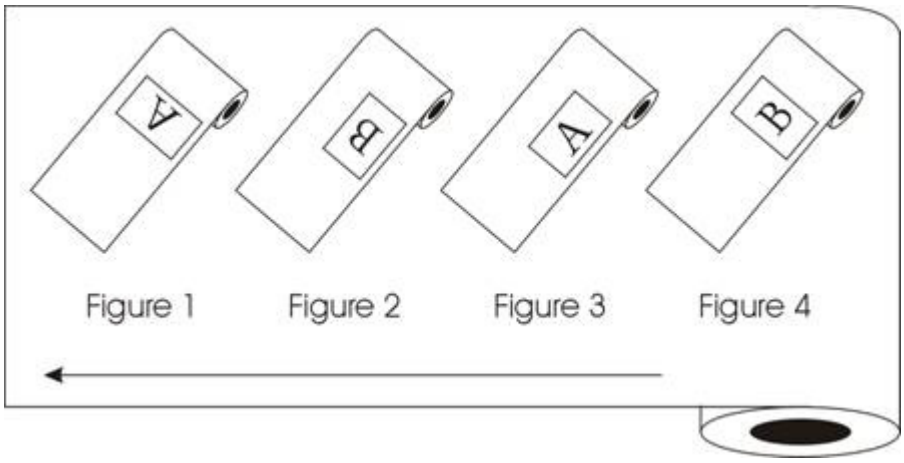
Portrait and Landscape Settings

Suppose that two documents have been created, where one document is noticeably wide, and the other is tall.

Wide Image
(landscape style)

Tall Image
(portrait style)

The following diagram shows how orientation affects the placement of these images on a paper roll and will give you an idea how to group them together.



The diagram is summarized as follows:

Figure	Image	Orientation
1	A	Portrait
2	B	Portrait
3	A	Landscape
4	B	Landscape

Notice that in both Figures 1 and 4, the document is being printed to use almost the full width of the paper roll, which is considered to be an efficient use of the roll. In comparison, Figures 2 and 3 do not use the full width of the roll, which creates wasted material.

Page Layout/Media Setup

The following sections will cover setting up your page layout, creating custom page sizes and other page options available with FastRIP 10.0.

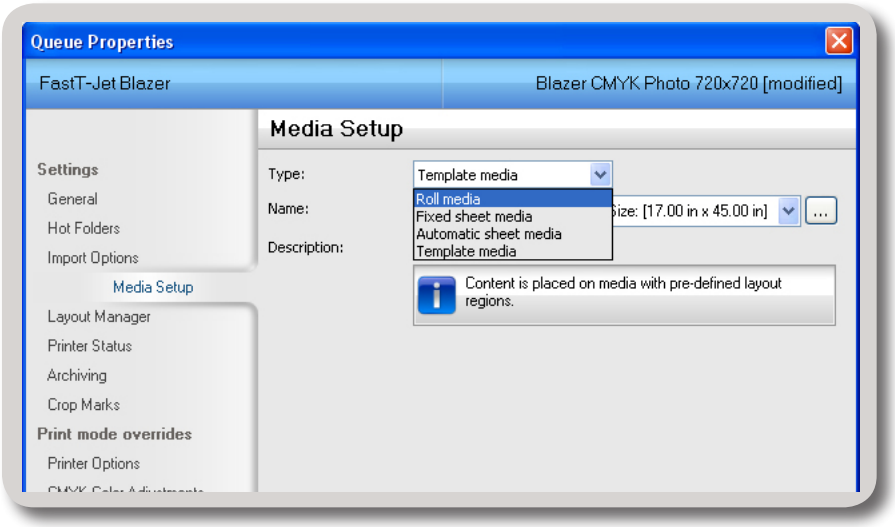
Setting the Page Size

Queue Pull-down Menu>> **Properties**>>**Media Setup** tab

The page size is the size and margins of the loaded media, which will be used for positioning of jobs in the Preview Pane. The page size is set as follows:

1) From the **Queue** Pull-down menu, choose **Properties**.

2) On the **Media Setup** tab, set the **Type** of media.



- **Roll media** - Preview jobs according to a specific roll width.
- **Fixed sheet media** - Preview jobs in terms of the sheet width and height.
- **Automatic sheet media** - Use the sheet width and height that was defined in the design application.

3) From the **Name** drop-list, choose a preset media.

About Custom Page Sizes

If a custom page size is being created, then the dimensions of the page size must correspond to how the page will be rendered on the printed page.

For example, if a tall document is being printed with portrait orientation, then the dimensions of the custom page size will be the same as the image dimensions.

However, if a landscape orientation is being used, the document will be rotated through 90 degrees, and the custom page size dimensions will be reversed.

This is summarized in the following table:

ORIENTATION	CUSTOM PAGE HEIGHT	CUSTOM PAGE WIDTH
Portrait	Document height	Document width
Landscape	Document width	Document height

Creating a Custom Page Size

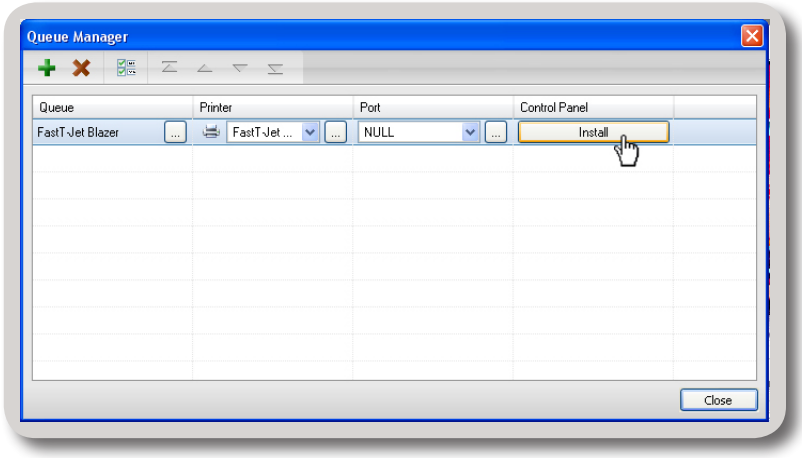
Queue Pull-down Menu>> **Manage Queues**

In the following procedure, the **Printer Page Setup** dialog is used to create page sizes that can be selected in your design application.

1) Choose **Queue** Pull-down menu >> **Manage Queues**.

2) For the given printer, under the **Control Panel** column, click the **Install** button.

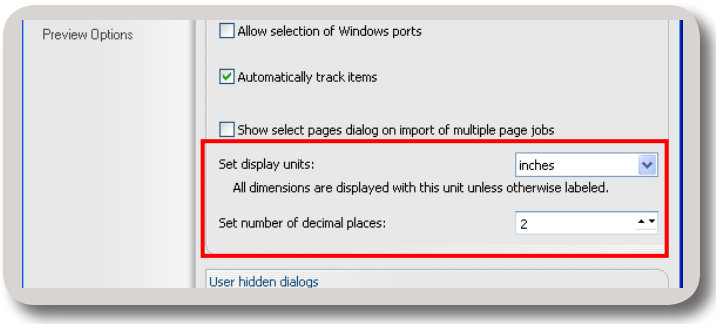
3) Click **Close** to close the **Manage Printers** dialog.



4) Next, from the **Tools** Pull down menu, select **Options**.

5) On the **General** tab, set the display units in which page sizes will be defined.

6) Click **OK** to close the **Options** dialog.


Preview Options
Allow selection of Windows ports
Automatically track items
Show select pages dialog on import of multiple page jobs
Set display units:
inches
All dimensions are displayed with this unit unless otherwise labeled.
Set number of decimal places:
2
User hidden dialogs

7) Select, from the **Printers** Pull-down Menu, **Manage Print Media**.

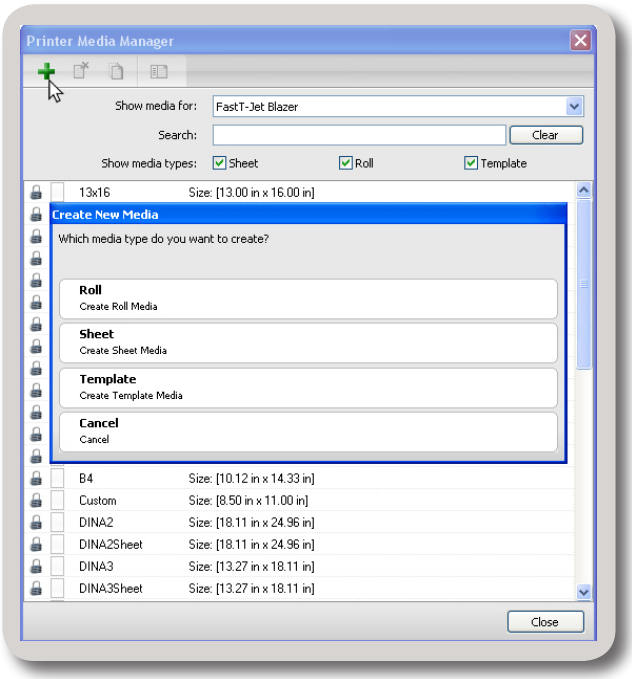
8) From the **Show media for** drop-list, choose the printer name.

9) The existing page sizes for the printer will be listed.

10) Click the **Add new print media** button.

11) From the **Create New Media** dialog, choose either **Roll** or **Sheet**.

12) Complete the parameters for the given media.



Working with Page Layout Templates

Templates can be used for lots of different work flows and you can use multiple templates within a queue. Templates will save you hours of time and allow you to automated repetitive tasks such as laying out jobs as well as setup an automated work flow inside FastRIP if required. When using templates, jobs as they arrive can be automatically scaled, rotated and positioned.

NOTE: The templates are most useful when printing on garments with a T-Jet Inkjet-to Garment Printer.

Some of the uses for templates are:

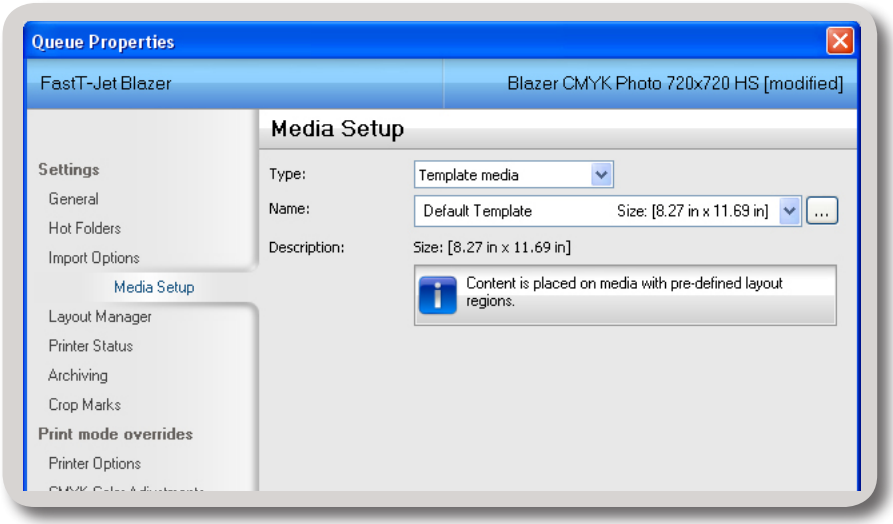
- Setting up a custom board size, where you can select the size of the print area and its exact position inside the print area of the bed
- Setting up custom nesting of jobs, multiple board / print areas inside the print area of the bed (for example on the Blazer Pro setup 3 different shirt boards).
- Automatic duplication for print the same image on a number of golf balls or hat at the same time.

Selecting a Template

Queue Pull-down Menu>> **Properties**>>**Media Setup** tab

To use templates, you must first make sure you have your Queue properties - Media setup configured for Templates.

1. Under the **Type** drop-down arrow, select **Template Media**.
2. To select a existing template, under Name drop-down arrow, select one from a list.



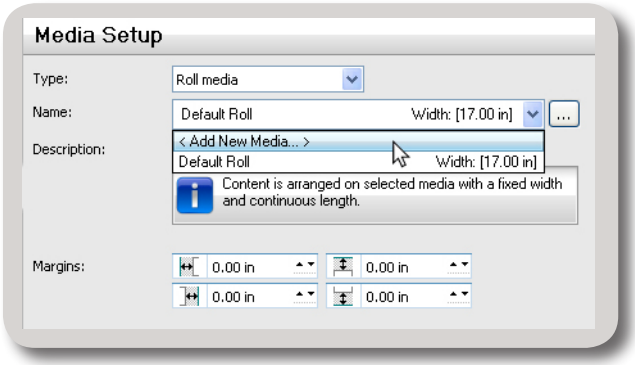
NOTE: To select a template from another location (a custom template in a custom location) click the ... icon to browse for the custom template. See next section, ***Creating a Custom Template***.

Creating a Custom Template

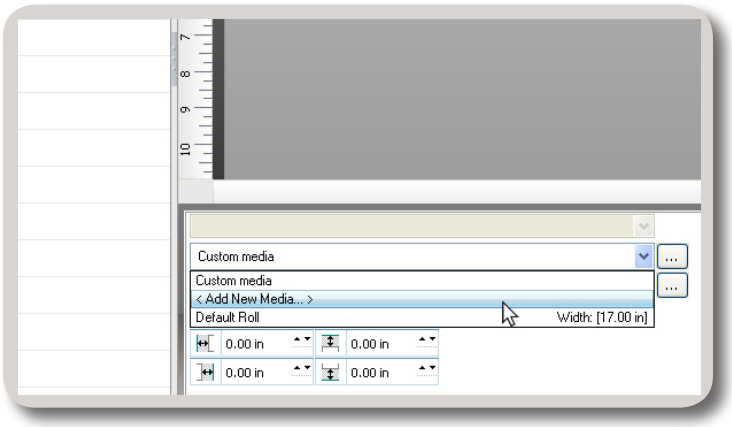
1. Select Add New Media

   There are 2 ways to select Add New Media.

   - Select **Add New Media** from the Template list in the Media setup.



   - Select **Add New Media** from the main window in the smart menu area (with no job selected) you can select **Add New Media** from the Template Media options drop down selection.

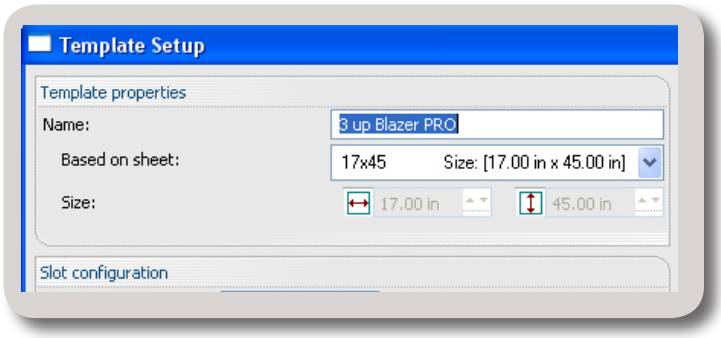


2. Set Name and Page Size

   The **Template Setup** Dialog will open.

   - First, enter in a name for the template under **Name**. For this example, we'll be setting up a 3-up Shirt Board template for the Blazer PRO

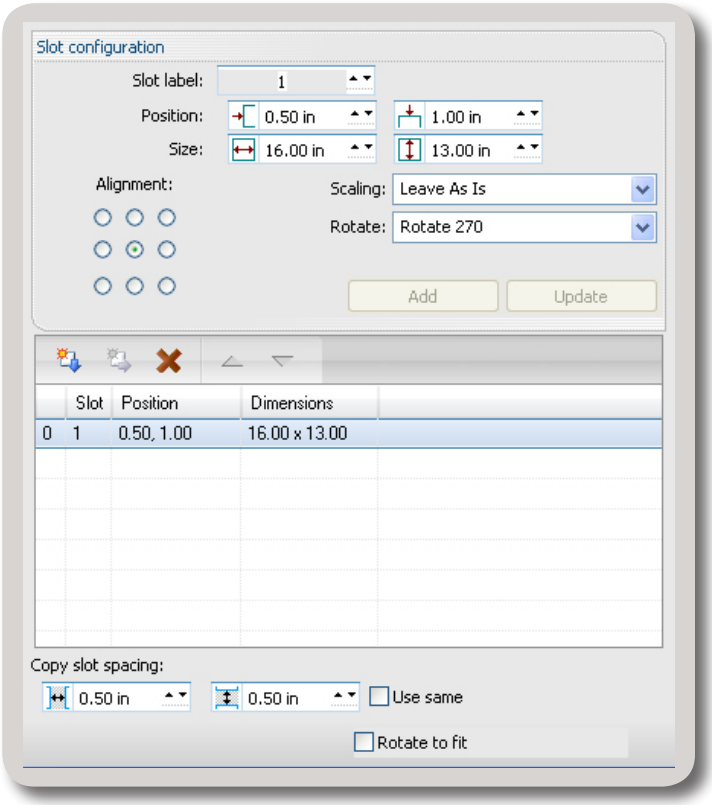
   - Next, select the total page size under **Based on Sheet**. For this example, 17x45 inches is the total printing area of the machine.



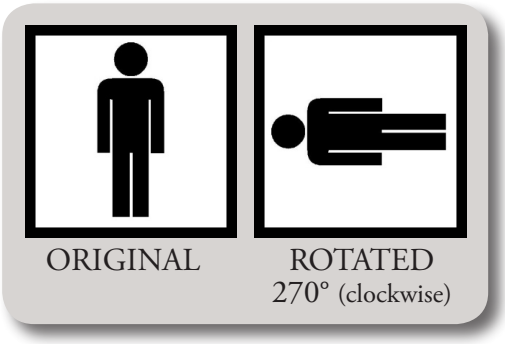
NOTE: You can enter in a custom size by selecting **Custom** from the list. Enter the dimensions under **Size**.

3. The next step is to define the first slot.
   Slots are somewhat like nesting where you set the printable areas and later assign the images to those areas for printing. For this example, the slots will represent the Shirt Boards on the Blazer Pro. Jobs are printed inside of the slots and areas

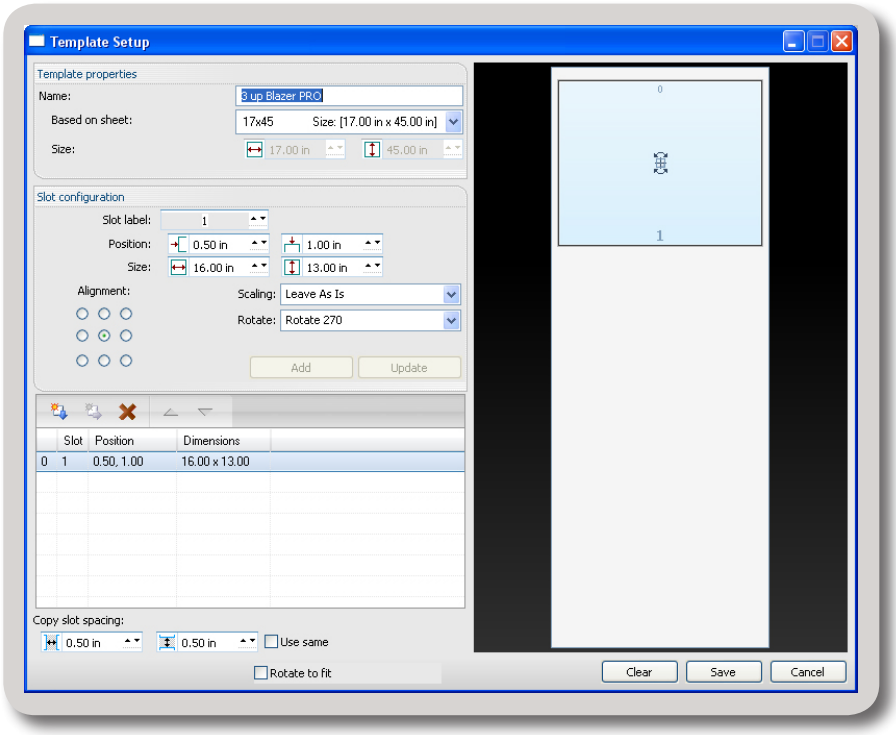
outside of the slots are the non-printable areas or masked areas. You can have multiple slots in several different arrangements to accommodate any need, if required. Each slot will have a number assigned to them (from 1 to 9). Slots assigned with a unique number can be for separate jobs or slots that share the same slot number will print the same job.



- To define the first slot, under **Slot Label**, select 1 (use the up and down arrows to adjust.
- Next, the **Position** fields act as margins. For this example we will set the left and right margins to 0.5 inches and the top and bottom to 1 inch.
- Under **Size**, enter in the print area dimensions. (16" wide and 13" high for this example).
- Under **Alignment**, set at center for the job to be automatically centered in the slot.
- You can set **Automatic Scaling** to enable jobs to be scaled and positioned after they are added to the template. This feature can help to ensure that the job is the right size before printing. For this example we are leaving it as is.
- Under **Rotate**, you can select to have the template automatically rotate the artwork based on landscape/portrait settings. For this example, we have selected **Rotate 270** (90° x 3 clockwise) based on having the shirt loaded with the neck of the shirt on the left of the slot (shirt board). If you wanted to load the shirts on the right side, you would select **Rotate 90**.



- Once you have added all the details for your slot, click on Add to create and it will show in the preview.



4. Add Additional Slots (if necessary).
Additional slots can be created by repeating step 3. Deselect current slot and continue with the next dimensions. If the next slot overlaps the current slot, it will not let you add.

If the next slots will be the same (dimensions etc), you can easily make duplicates of the first slot or any other slot.

There are five icon tools that will help in the creation of your template layout.

Copy selected slot down in position

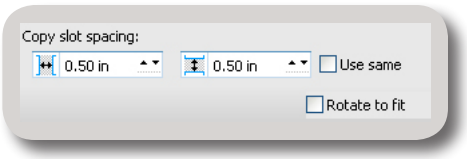
Copy selected slot to the right

Delete selected slot

Move selected slot up

Move selected slot down

The Copy slot spacing will allow you to adjust the measurement between the copied slots (either by left and right or by above and below). The measurements here must be entered prior to selecting a copy function in order for the entry to work properly.

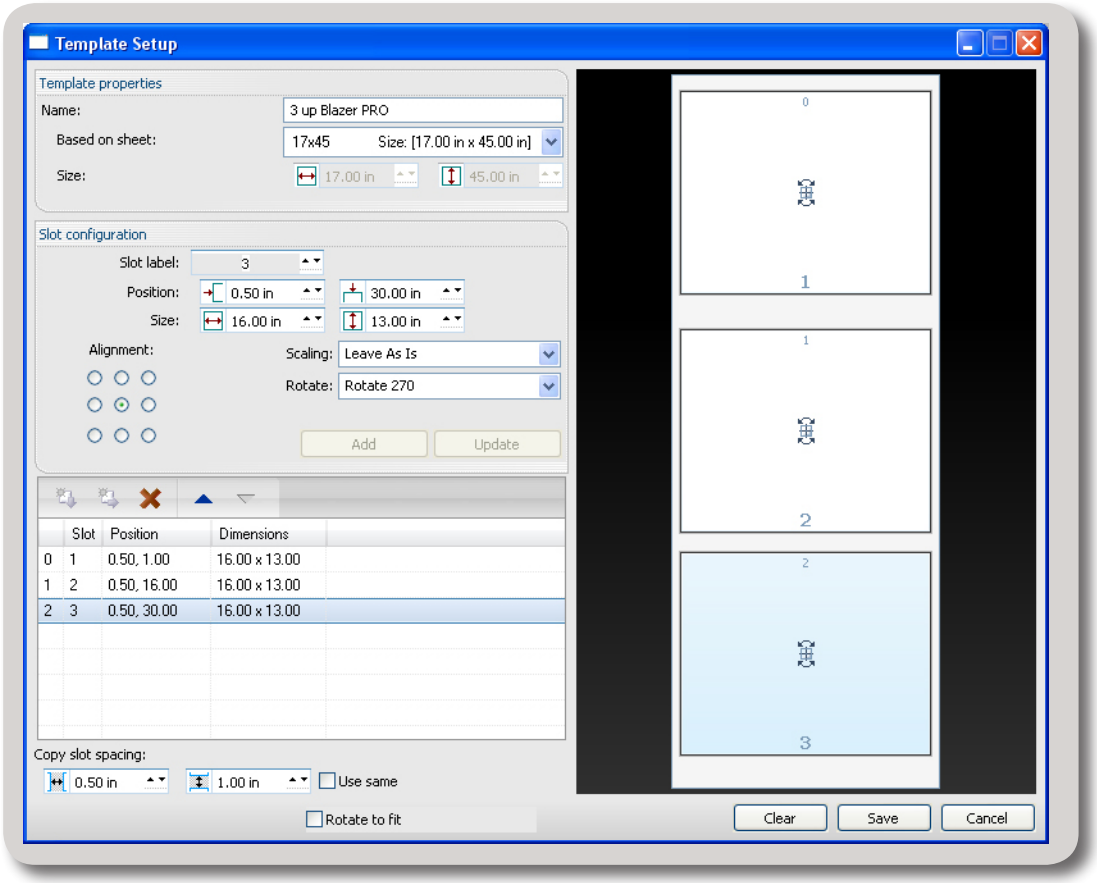


So, if you wanted extra space between the first slot and the one that will go below it, do the following:

- Select the slot to copy
- Enter the extra measurement in the appropriate field
- Click **Copy selected slot down in position**.

NOTE: If an icon is grayed out, it is not available for use, i.e., not having enough room on the template available.

5. Separate slot numbers (if necessary).



Copying slots will leave all the slots with the same slot number (1). This is fine if you are for printing copies of the same job. If you want to print different designs on each slot, change the slot numbers of the duplicate slots.

- Select the slot you want to change
- Adjust the slot label number to a new number.
- Click **Update** to apply the change

  Any other changes you want to make can be made in the same way.

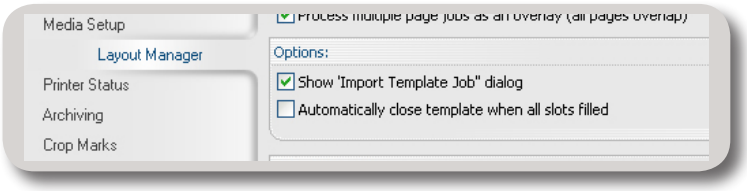
6. Click Save to save your new template.

Note: You can create as many different templates as you want and select them from the main interface as discussed in the earlier section, ***Selecting a Template***.

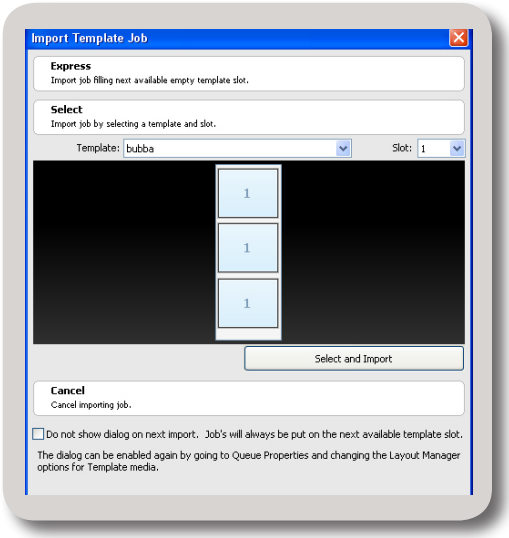
Template Settings

Import Template Job Dialog

In the Layout Manager you can choose how jobs are added to the templates.



By default the **"Show import template job" dialog** is enabled. This means as each job is added to FastRIP a dialog will display which template and slot are used, allowing you to edit the setting. If this is disabled then the Express method is used.


Import Template Job
Express
Import job filling next available empty template slot.
Select
Import job by selecting a template and slot.
Template: bubba
Slot: 1
1
1
1
Select and Import
Cancel
Cancel importing job.
Do not show dialog on next import. Job's will always be put on the next available template slot.
The dialog can be enabled again by going to Queue Properties and changing the Layout Manager options for Template media.

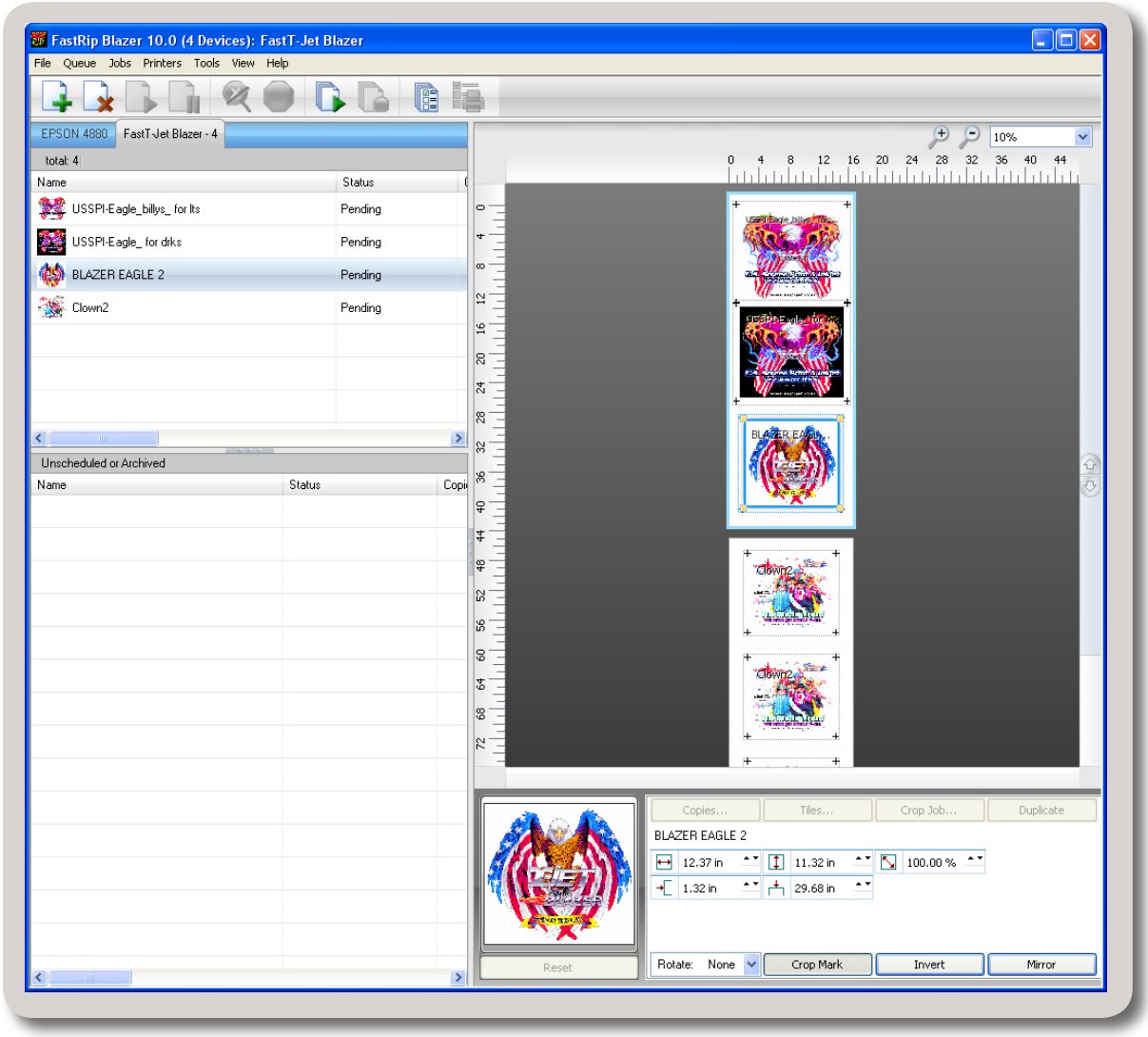
- Express will import the job into the next available slot, using the currently selected template in the queue.
- Select will allow you to select which template and slot you want to add this job to.

  Select the template you want to use from the drop list.

  Select the slot you want to use by using either drop down list on clicking on a slot.
- Cancel will cancel and the job will not be added.

Layout Adjustments and Options

Once jobs are added you can change there position and re-size them as normal, you can even drag and drop jobs between slots if required.

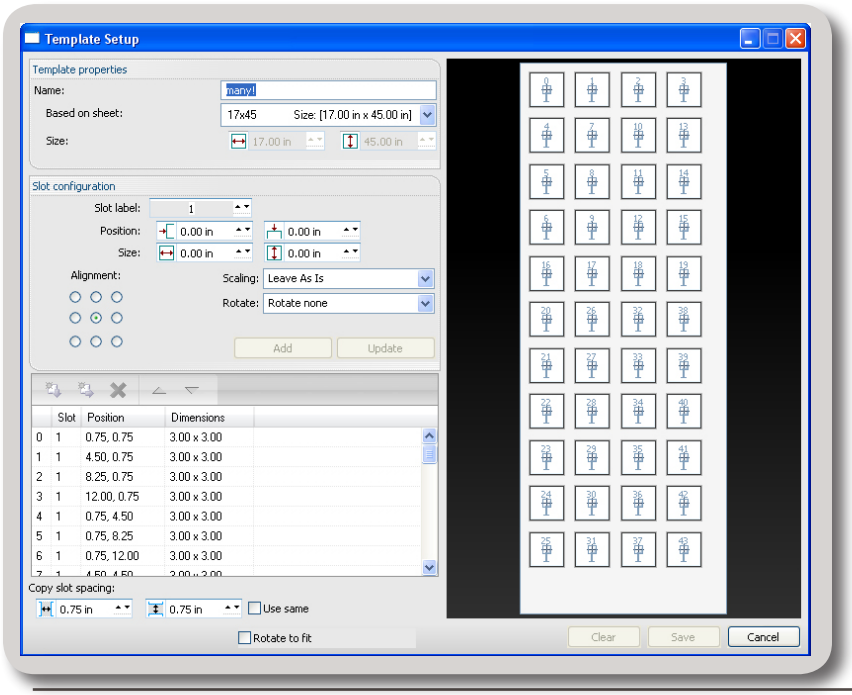


Using this type of template there is no reason to have to layout the 3 jobs in FastARTIST first, simply send three separate jobs and FastRIP will handle the layout for you.

Note: This also improves the overall RIP performance.

Multiple Layout

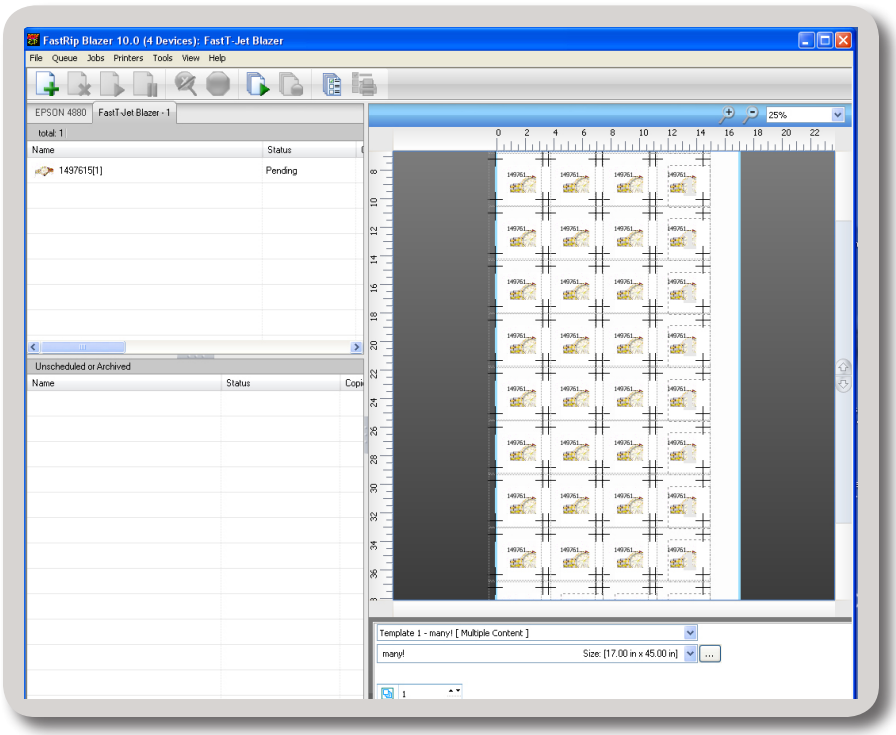
This example template layout shows a possible template for printing tennis balls, all of the slots are slot 1 and this means when an image is added it will be duplicated in all the slots and is a simple way of printing the same image on many Tennis balls at once.



Note: Select **Scale to fit**, under **Scaling** on the first slot so the job will be scaled down to fit inside the slot area, in each slot number.

Simply add a job and the job is scaled and correctly laid out ready for output.

Slots can also be setup with different sizes (even if they share the same slot number).

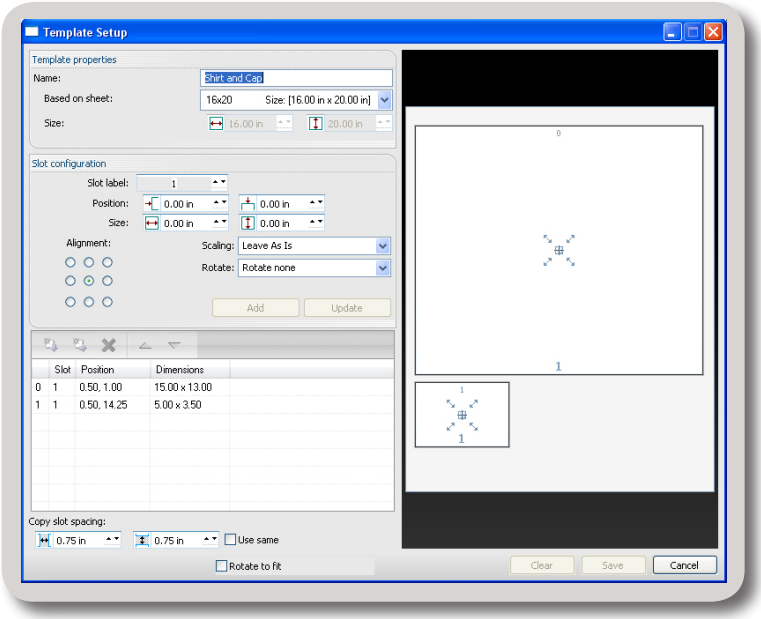


Shirt and Cap Layout

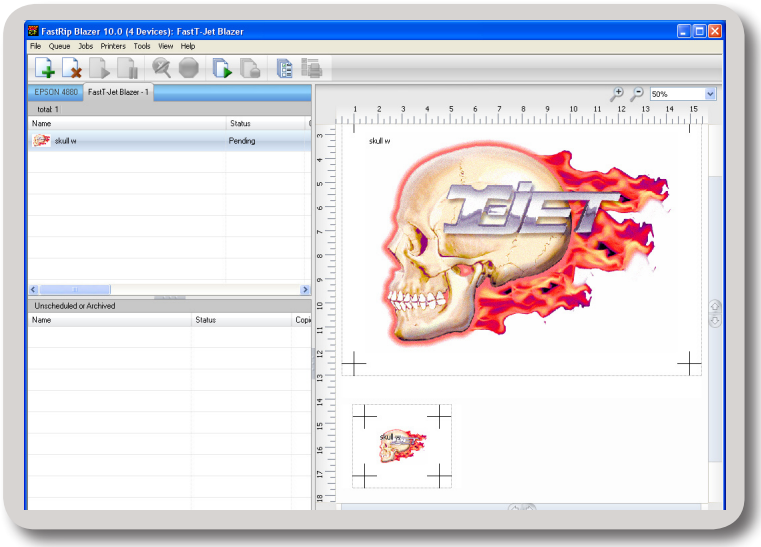
This is a template layout that will print a T-shirt and a Cap from the same image.

Both slots are set to the same slot number and because they are different sizes both use the Scale to Fit Always, so that the image will be scaled to the correct size for the shirt board and the cap board.

The Shirt board is set for rotate 270, as the neck of the shirt will be loaded on the left and the cap will be no rotation.



When a job is imported into FastRIP the job is scaled and correctly laid out ready for output for both a T-shirt and a Cap.



Printing Template Slots

When printing to slots in a template, you may want to scale and position your job in FastARTIST or application of your choice such as PhotoShop. As the template slots are user definable, you will still want a way to create custom page sizes to match the slot size.

You can do this using the custom page size feature in the File – Print – page setup dialog (you will find this in advanced) or in the Page setup in FastRIP setup, there is a custom option.

Setup the custom page to match your slot size and you can then position and size your job appropriately.

NOTE: This only applies if you want to avoid scaling and positioning in FastRIP.

TEMPLATES HOT FOLDER

Queue Pull-down Menu>>**Properties**>>**Hot Folder** tab

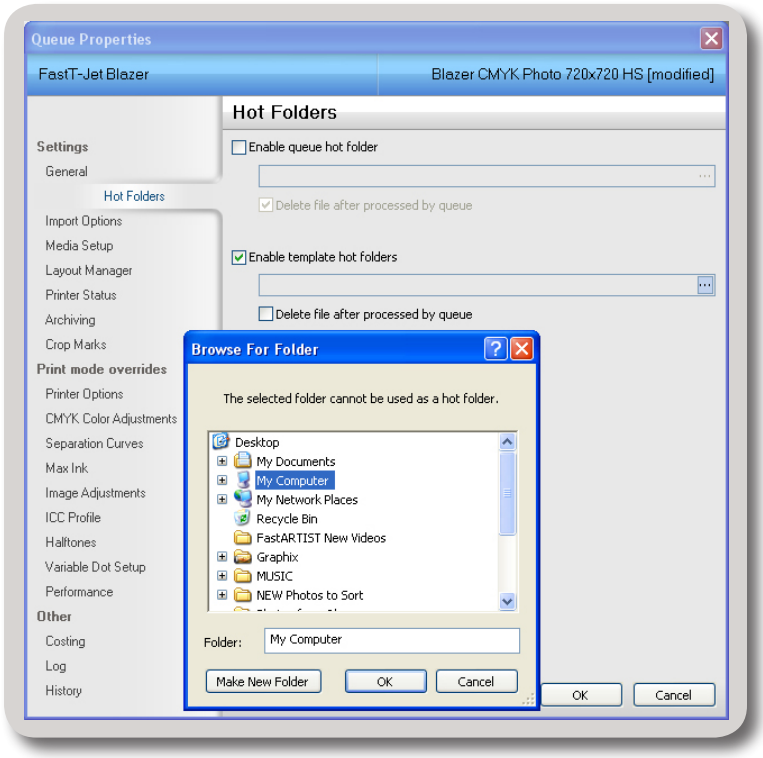
Templates come with their own **Hot Folder** support, providing an automated way of using templates. This is ideal for users who want to setup work flows with minimum or no interaction with the FastRIP workspace. It can be used with Internet front ends, in which customers could upload files via the Internet and then placed in the correct hot folder for printing to the correct board or with additional front end software to avoid actual interaction with FastRIP.

To enable the **Template Hot Folder**:

- Go to **Queue Properties** under the Queue Pull-down Menu and select the **Hot Folder** tab.
- Tick the appropriate checkbox.
- Set the **Hot Folder** location. A window will open up requesting a **Hot Folder** location.
- You can select whether or not you would like the print file to be deleted on completion.

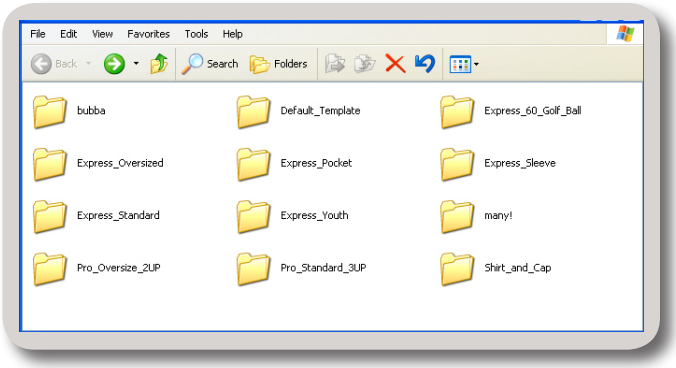
SETTING UP A HOT FOLDER

1. To setup a **Template Hot Folder**, first create a master folder (directory) on your local machine or across a local network.
2. Then go to **Queue** Pull-down Menu>>**Properties**>> **Hot Folders** tab.
3. Tick the **Enable template Hot Folders** checkbox.
4. In the **Browse For Folder** window, browse for the master folder (directory) you created in ***Step 1***.
5. Click OK



Using the Template Hot Folder

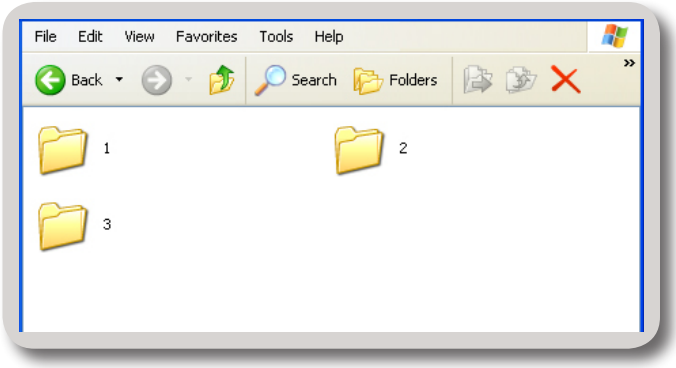
After setting the Hot Folder, FastRIP automatically creates a subfolder in the directory for each of your templates.



Simply by adding jobs into the "named" template folder, the jobs will be added to your queue, using that template. The jobs are added in Express mode.

In this example, a 3-up folder, there is a folder representing each slot number.

So if you add a job to the root of this folder it gets added to the queue using this template in Express mode, but if you add the job into one of the sub-folders labeled "1", "2" or "3", then the job will be added to that particular slot of that template.



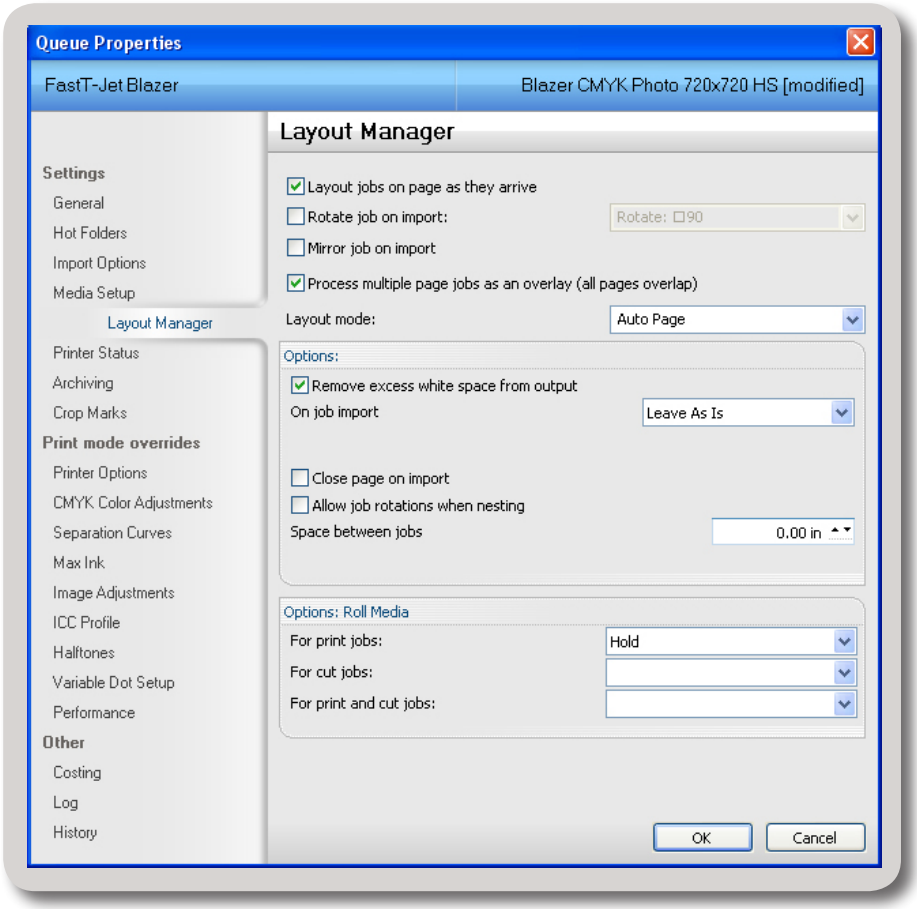
It's easy to use hot folders for templates and have complete control over which template and slot is used for printing the job.

Layout Manager Tab

Queue Pull-down Menu>>**Properties** >> **Layout Manager** tab

To access the **Queue Properties** dialog, from the **Queue** Pull-down Menu, select **Properties** and then click the **Layout Manager** tab. The **Layout Manager** tab is used to schedule jobs and manage jobs that exceed the media size.

The available controls will vary according to the model of printer, the Layout Mode selection (if available), and whether Tools menu >> Options >> Show Advanced Settings is enabled.



NOTE: If the queue is Stopped, then all jobs are automatically placed on Hold, regardless of the Output Scheduling settings.

Setting the Layout and Scheduling

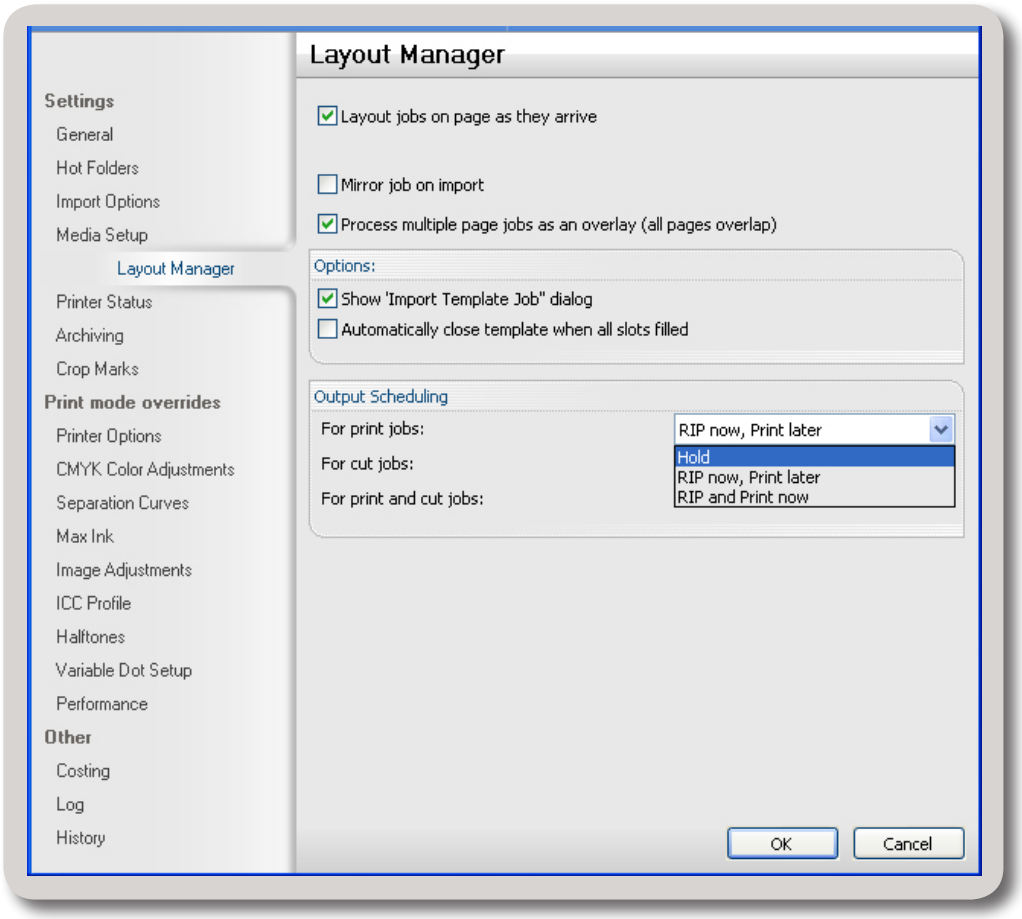
Queue Pull-down Menu>> **Properties** >> **Layout Manager** tab >> **Output Scheduling**

The following sections contain brief summaries of layout and scheduling controls that affect how jobs are processed when received by FastRIP. From the **Queue** Pull-down Menu, choose **Properties** >> **Layout Manager** tab >> **Output Scheduling** to access the Layout and Scheduling Features.

Scheduling Settings

Queue menu >> **Properties** >> **Layout Manager** tab

The Output Scheduling controls are set according to the type of job. For example, if the printer and cutter are separate devices, then it would be desirable to hold the cut portion of the job, until the media has been loaded into the cutter.

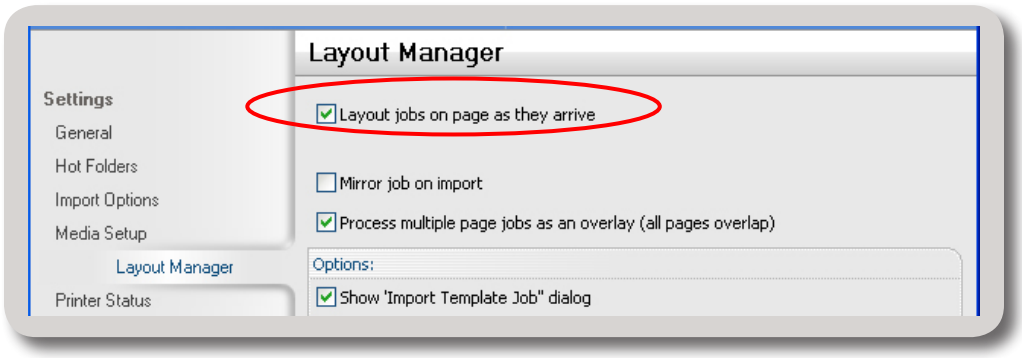


- From the **Queue** menu, choose **Properties** >> **Layout Manager** tab >> **Output Scheduling**.
- The scheduling controls are differentiated according to print jobs, cut jobs and print & cut jobs (i.e., print jobs that include cutting data).

Layout Jobs As They Arrive

Queue menu >> **Properties** >> **Layout Manager** tab

When jobs are received, the default behavior is that they are "scheduled" (i.e., put in the active list, and positioned in the Preview Pane). However, this behavior is toggled per the "**Layout jobs on page as they arrive**" checkbox.

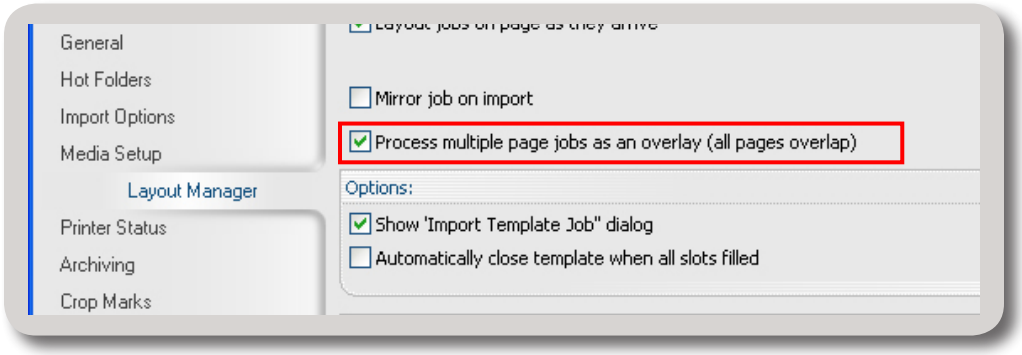


- **ON** = incoming jobs will be placed in the active list, and positioned in the Preview Pane
- **OFF** = place jobs in the unscheduled list

Page Overlay

Queue menu >> **Properties** >> **Layout Manager** tab

If the "Process multiple page jobs as overlay" checkbox has been ticked, then the color layers within a job (i.e., CMYK and spot color layers) will remain "stacked," as opposed to being nested as separate jobs.



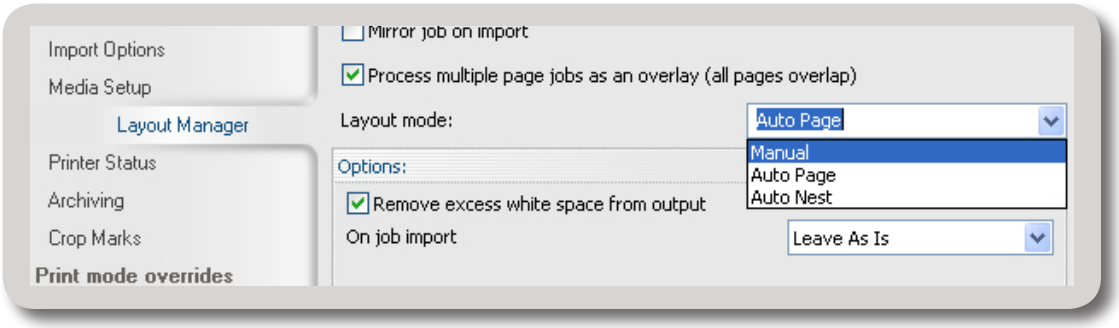
Layout Mode

The Layout Mode control defines how jobs are nested (i.e., collected and repositioned to conserve media) in the Preview Pane. When the collected jobs fill an entire sheet (or roll), the page is closed and printing can begin. For jobs that are nested automatically, you can specify that printing begins when a certain portion of the media is full.

1) From the **Queues** menu, choose **Properties**.

2) On the **Media Setup** tab, set the **Type** to either **Roll media**, or **Fixed sheet media**.

3) On the **Layout Manager** tab, the **Layout mode** drop-list will now be available.



- **Manual** – Add jobs to the Preview Pane without attempting to conserve media.
- **Auto Page** – Append a page break to each job as it is received.
- **Auto Nest** – Reposition newly received jobs to conserve media. When you are ready to print, right-click an empty portion of the Preview Pane and choose Print.

Note: If jobs have not been nested (i.e., Manual or Auto Page), then the jobs can still be nested by right-clicking an empty portion of the Preview Pane and choosing **Automatic Nesting** >> **Auto Nest All Content**.

Note: The available controls will vary according to the model of printer, the Layout Mode selection (if available), and whether Tools menu >> Options >> Show Advanced Settings is enabled.

For more information on the available modes with examples of Nesting, refer to the following section.

Nesting Jobs

Nesting is when you group jobs together for multiple job printing by grouping jobs and repositioning to conserve media.

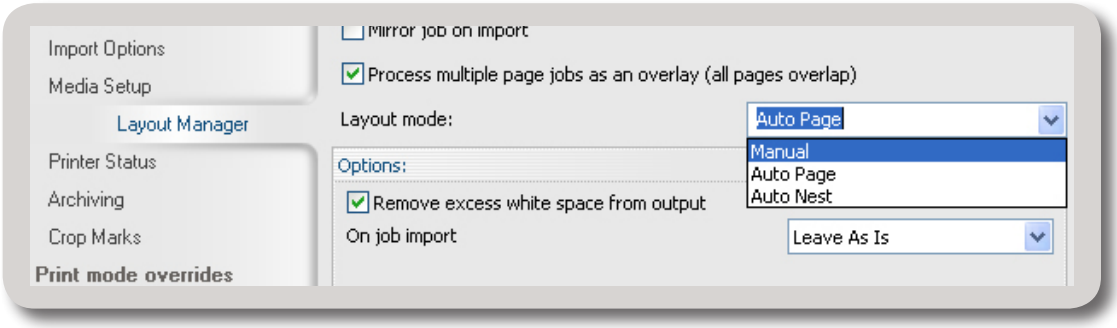
Setting the Layout Mode

As described in the previous section, you will need to tell FastRIP to Nest in the Queue Properties>>Layout Manager tab.

1) From the **Queues** menu, choose **Properties**.

2) On the **Media Setup** tab, set the **Type** to either **Roll media**, or **Fixed sheet media**. This step is required on initial setup.

3) On the **Layout Manager** tab, the **Layout mode** drop-list will now be available.



NOTE: If you have already set the media settings in step 2, you will not have to set each time, unless you want to change your default selection.

Types of Nesting Layout Modes

Manual Layouts

When **Manual** is selected, jobs are added to the Active Jobs list without conserving media in the Media Preview. However, nesting can still be applied, per figures (shown in Figures 1 -3) where the **Auto Nest All Content** command is used to reposition jobs and create a page break.

Fig. 1 (left) - When **Manual** is selected, jobs are added to the Preview Pane without repositioning to conserve media.

Fig. 2 (right) - Right-click an empty portion of the Preview Pane, and then choose **Automatic Nesting** >> **Auto Nest All Content**.

Fig. 3 (bottom) - The jobs are automatically nested to use the full width of the media, and a page break is used to define the edge of the nested jobs.

As an alternative to Auto Nest All Content, jobs can be repositioned using the mouse, per Figures 4 and 5 below. Once the jobs have been repositioned, use the Auto Page Break command to define the edge of the combined jobs.

Fig. 4 - As in Fig. 1, jobs are added to the Preview Pane without repositioning to conserve media.

Fig. 5 - However, jobs can be dragged with the mouse. Then right-click an empty portion of the Preview Pane and choose Auto Page Break to define the edge of the nested job.

Once the page of combined jobs has been defined, right-click an empty portion of the page (in the Preview Pane) and choose Print.

Auto Page Layouts

When the **Auto Page** option is selected, a page break is automatically appended as each job is received. Nesting can still be manually applied by using the Auto Nest All Content command (see Figures 6 and 7).

Fig. 6 - A page break is appended to each job as it is received.

Fig. 7 - If nesting is required, then right-click an empty portion of the Preview Pane and select, **Automatic Nesting** >> **Auto Nest All Content**.

Fig. 8 - After the jobs are nested, a new page break is created to define the page. If necessary, the jobs can be repositioned by dragging within the page.

Once the page of combined jobs has been defined, right-click an empty portion of the page (in the Preview Pane) and choose Print.

Automatic Nesting Layouts

When Automatic Nesting is enabled, the page breaks adjusts automatically to fit jobs as they are received, while manual doesn't offer that luxury, but gives you a bit more control.

Fig. 9 - As print jobs are received, they are nested to fit within the page break.

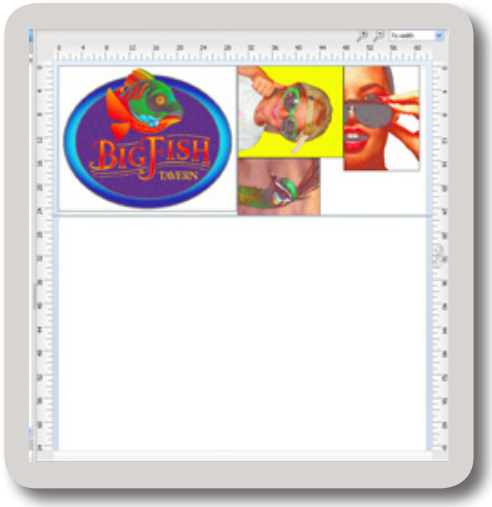


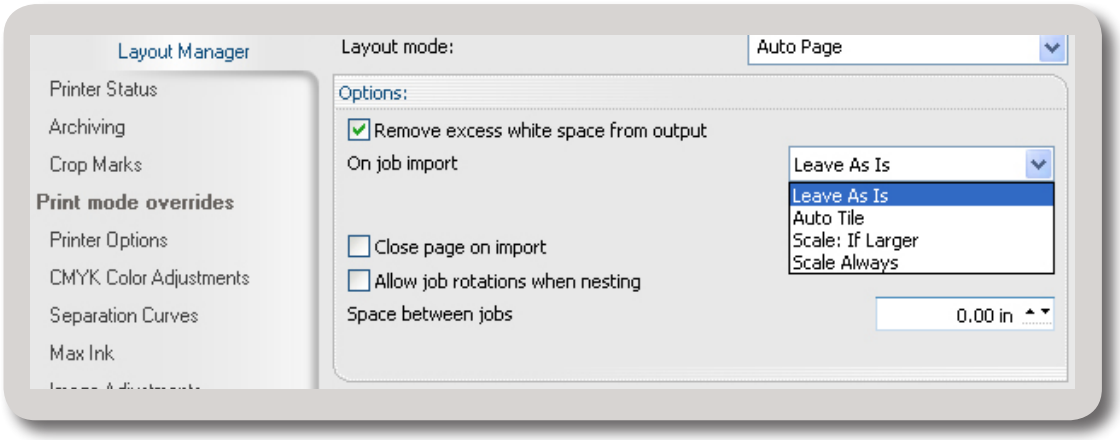
Fig. 10 - When an additional job is added, jobs can be rotated to minimize the increase in page size. Otherwise, the page break will move to accommodate the larger page size.

Once the page of combined jobs has been defined, right-click an empty portion of the page (in the Preview Pane) and choose Print.

Page Nesting/Layout Options

Queue Pull-down Menu>> **Properties** >> **Layout Manager** tab

The Page Nesting / Layout Options are used specify how incoming jobs should be tiled when they exceed the media size.



Note: The available controls will vary according to the model of printer, the Layout Mode selection (if available), and whether Tools menu >> Options >> Show Advanced Settings is enabled.

Remove excess white space from output on Job Import

If there is excess space that trails the page break of nested jobs, then disregard the excess space (i.e., do not waste blank media that trails the job).

Allow job rotations when nesting

When enabled, jobs can be rotated when nesting.

Space between jobs

Distance to be maintained between jobs when nesting.

Tile large jobs on import

If a new job exceeds the media size, then automatically create tiles and apply the tile options (see the Options button).

Options - No overlaps

No gap or overlap is applied.

Options - Gaps

The gap is the amount of media that will be left blank between tiles.

Options - Overlaps

The overlap is the amount of overprint that each tile will contain, such that the end of each tile includes a portion of the subsequent tile.

Limit page length (Roll media only)

For roll media, do not allow the total length of nested jobs exceeds this amount.

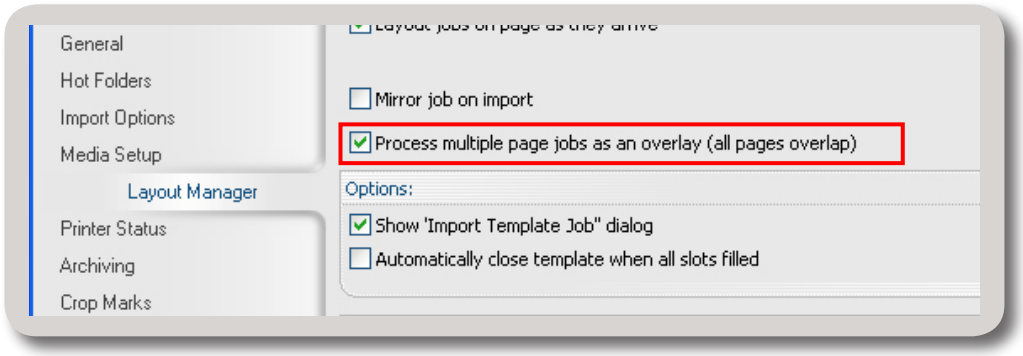
Limit page coverage (Sheet media only)

For sheet media, do not allow the total area of nested jobs exceeds this percentage of the sheet.

Page Overlay

Queue menu >> **Properties** >> **Layout Manager** tab

If the "Process multiple page jobs as overlay" checkbox has been ticked, then the color layers within a job (i.e., CMYK and spot color layers) will remain "stacked," as opposed to being nested as separate jobs.



CHAPTER 7

Printing From a Graphics Application

Introduction

The following section detail how to from specific software applications like, Adobe Photoshop and Illustrator as well as Corel Draw. Since the *Windows Print Menu* works the same no matter what program you are using, there are very few differences when printing from different applications.

As long as you remember to select the proper FastRIP printer, you will be ready to print. Even if you forget to go to *Properties* and select *Advanced*, FastRIP will work because the *Current Setting* default prints the **Standard Density** function of FastRIP .

Basic Printing

SENDING A PRINT JOB

Printing to FastRIP is like printing to a desktop printer. For example, suppose that your Windows application uses the standard **Print** dialog.

1) From the Windows application **File** menu, choose **Print**.
2) The **Print** dialog will open.
3) Choose the name of your printer from the drop-list.
4) The printer description should indicate that it is a "FastRIP" type of print destination, which indicates that print jobs will be processed through FastRIP.
5) If the printer description does not indicate "FastRIP," then search for another printer name from the drop-list.
6) Click **OK** to send the print job.

Printing From Adobe Photoshop

Here are the steps necessary to print an image created in Adobe Photoshop:

1. Open Photoshop and the image you wish to print.

2. Create the color separations, called "Channels," in Photoshop and place the "Preview Eye" next to the channel you want to output.

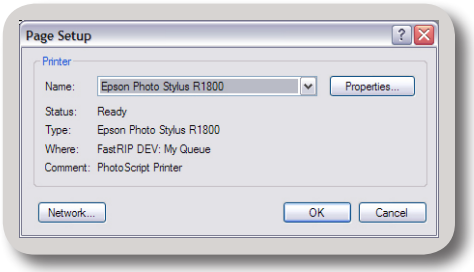
3. From the *File* menu choose *Print with Preview*.

NOTE: If you are using Photoshop 6 use *Print Options*. In Photoshop 5 and 5.5, go to *File* > *Page Setup*.

4. A print dialog box will open. Click on **Page Setup** then Click on **Printer** and choose the FastRIP installed printer. Remember, there will be TWO Epson printer drivers. The one you want to use has lower case characters in the name.

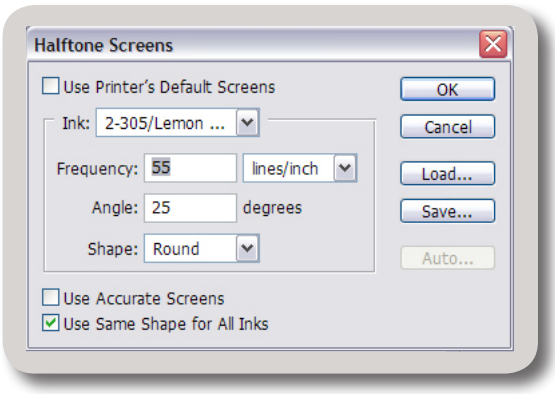
5. While still in the **Page Setup** dialog box, make sure to verify that the correct **Page Size** is selected.

   - Click on the **Properties** button.
   - The **Document Properties** dialog for the printer will open. Click on the **Advanced** button.
   - Do **not** make any changes to the **Printer Features** section.
   - Click on **Change Settings** under **Print Mode**.
   - Choose the proper function from the drop down list.
   - Click on *OK* to close the **Document Properties** dialog.
   - Click on *OK* twice to close the **Page Setup** dialog.



Click on the *Properties* button to access *Page Size* information

6. Click on the Screens button. Uncheck **Use Printer's Default Screens**. Drop down the Ink menu and select the first channel. Enter the recommended Frequency, Angle and Dot Shape information. Do this again for the next channel until all the channels are set.

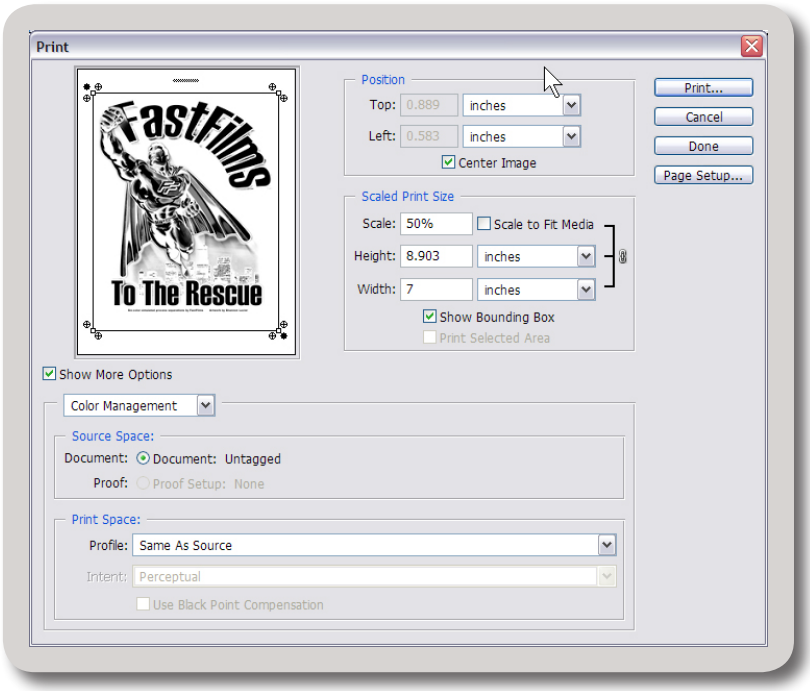


7. Click on OK.

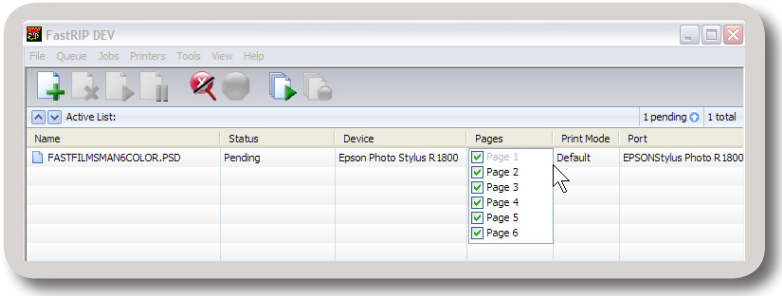
NOTE: The "default" setting is Current Setting. This is the SAME as the FastRIP Standard Density function. This means that if you want to print with the Standard Density ink settings, you DO NOT have to come here and change it. FastRIP will automatically default to this setting!

8. Your job is now ready to print. Select the *File* > **Print with Preview**.

   - Check **Show More Options**, if not checked
   - Set the **Output** dropdown menu to **Color Management**.
   - To get the proper halftone dots, make sure the **Color Handling** (*Print Space Profile* in previous PhotoShop versions) is set to **Separations** or **Same As Source**.



9. Select **Print**. The RIP will immediately begin processing the PostScript file. As the file is processed, FastRIP will perform calculations that convert the PostScript file into raster data. Once the print job has begun, the FastRIP Queue will display the progress of the printing job.

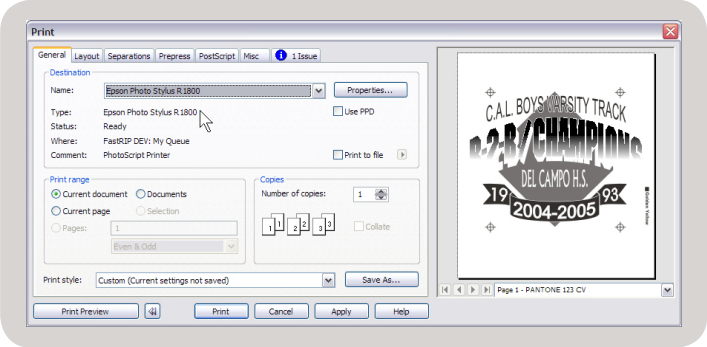


10. Watch your image print… or start working on the next one.

Printing from CorelDRAW

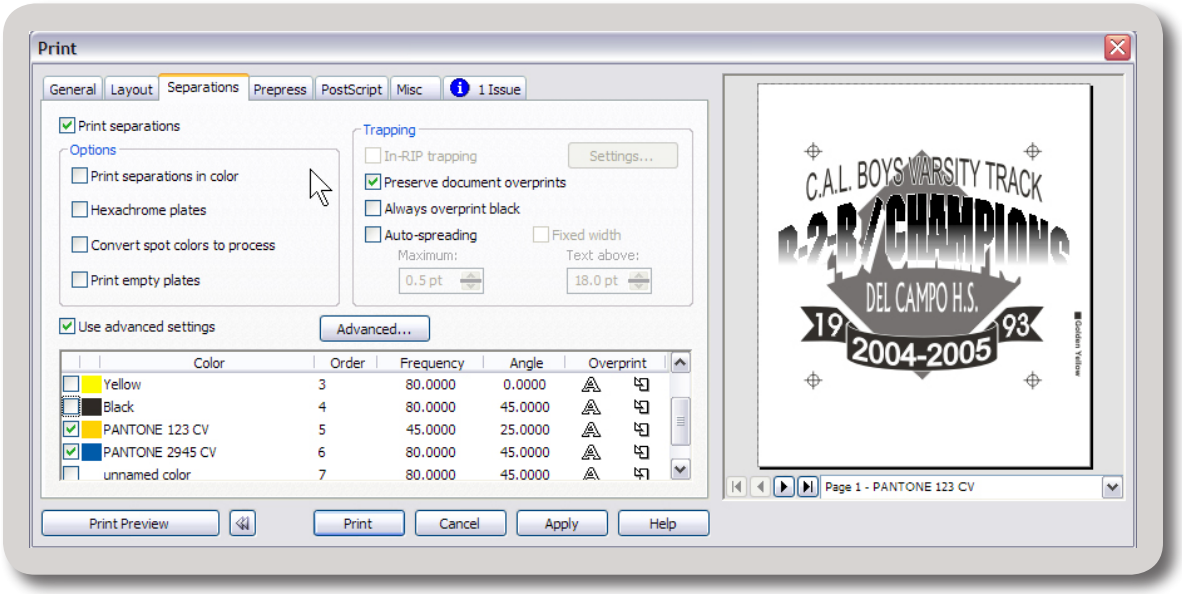
Below are the steps to print from *CorelDRAW* on a Windows-based system.

1. Open *CorelDRAW*
2. Create the color separations as **spot colors** or **4-color process**
3. From the **File** menu, choose **Print**
4. From the **General** tab, choose the FastRIP installed printer (Epson Stylus Pro 4800, Epson Stylus Pro 4000 PS, Epson Stylus Pro 7800-Full, etc.) Remember to select the printer with lower case characters in the name. Click on **Properties**.



5. The **Document Properties** dialog for the printer will open. Click on the **Advanced** button.
6. Do not make any changes to the **Printer Features** section.
7. Click on **Change Settings** for **Print Mode**.
8. Choose the proper function from the drop down list.
9. Click on *OK* to close the **Document Properties** dialog.
10. Click on *OK* to close the **Page Setup** dialog.

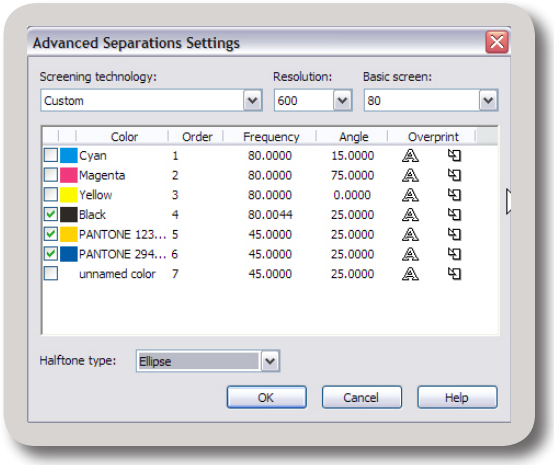
11. Click on the **Separations** tab. Put a check by **Print Separations**. Click on the **Advanced** button.



12. In the **Advanced Separation Settings** window, put a check by the spot colors to print. Click on the **Frequency** and **Angle** sections to adjust the settings.

13. Select the **Halftone** type and **Dot Shape**. Click on *Ok*.

14. Your job is now ready to print. Click on **Print** in the main *CorelDRAW* print window.



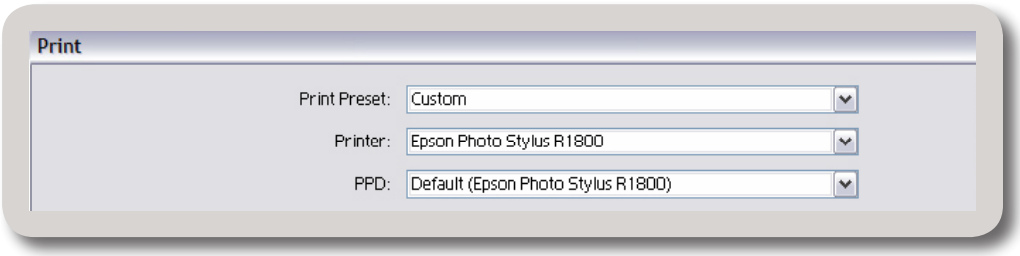
15. Watch your image print… or start working on the next one.

Printing From Adobe Illustrator

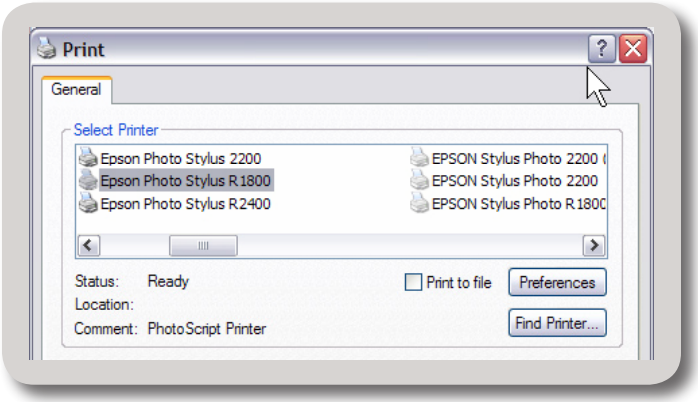
The Adobe Illustrator CS versions are the newest editions of Adobe's graphics application. This section will outline the steps of printing from within Illustrator CS (or CS2 and CS3) followed by printing in older versions of Illustrator.

Illustrator CS versions

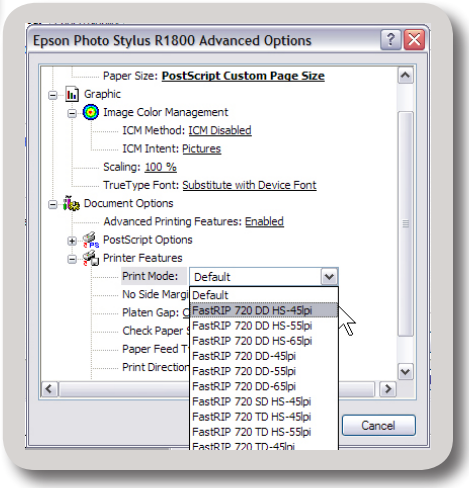
1. Open the graphics file you wish to print.
2. Go to *File* > *Print* and select your FastRIP printer.
3. You will notice that newer versions of Illustrator (CS versions) locate a PPD file for use so you can leave the PPD at **Default** (Epson Color Stylus*, Epson Photo Stylus *, Epson Stylus Pro * PS, etc.)



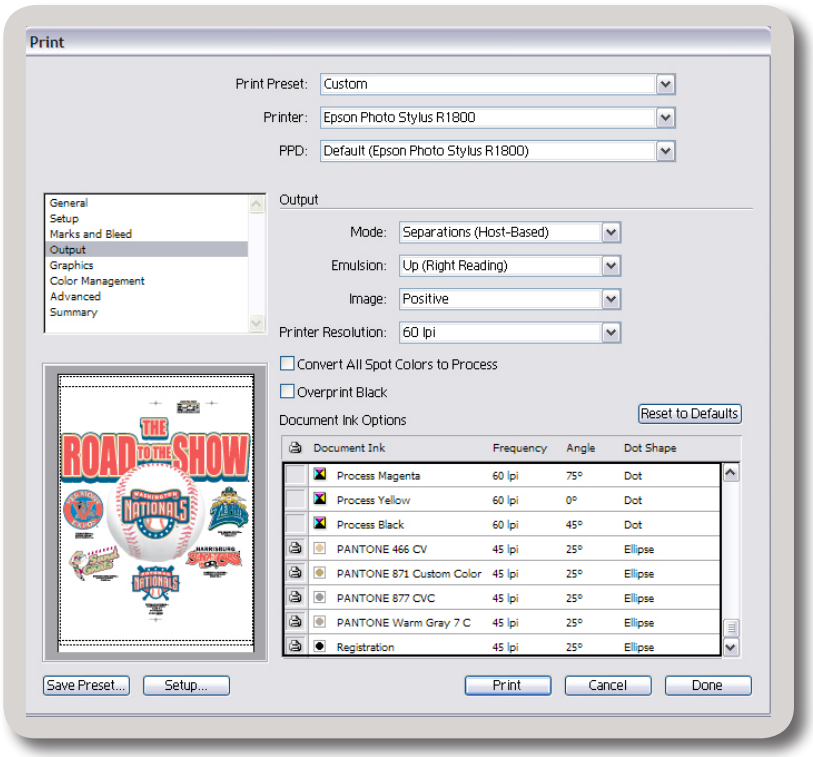
4. Click on **Setup** and select your FastRIP printer. Click on **Preferences** and then the **Advanced** button.



5. Set the **Paper Size**. Under the **Print Mode** menu select the proper FastRIP function. These functions are listed starting on page 51 of this manual. Click on *Ok*. In the **Layout** tab, set the **Orientation**. Click on *Ok* in **Printing Preferences**.



6. In the *Print* window, locate the section called **Output**. Change the mode to *Separations*. Put a **Printer Icon** next to the spot colors to print. Set the page orientation under **Emulsion.** Set this to **Up** (Right Reading) and **Image** to **Positive**. Adjust each spot color **Frequency**, **Angle and Dot Shape**. Click on *Print*.



7. Watch your image print… or start working on the next one.

Illustrator Versions 10 and Previous

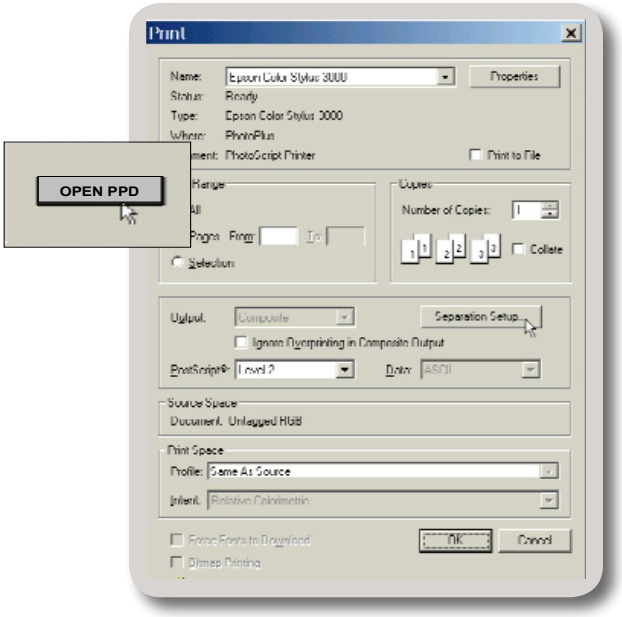
Most programs don't require a **PPD** file be loaded loaded when you print. In fact, you don't need to load a **PPD** when printing from Photoshop or *CorelDRAW* on a Windows platform. However, earlier versions of Adobe Illustrator are an exception to this rule. To print an image from an earlier version of Illustrator you will need to specify a PPD to use.

In this section we will outline the processes to follow if you are using Illustrator *ver. 10* or below. In the next section we will cover the newer Illustrator *CS* versions.

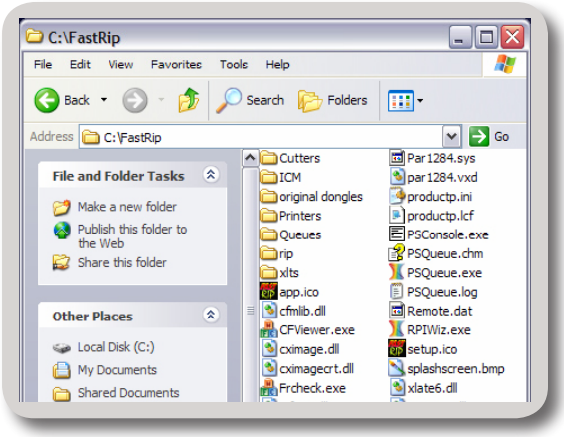
1. Select **Print** from the **File** menu. Choose your FastRIP Epson printer and then click on **Properties**. Set the **Page Size** and click on **Advanced**. Choose your FastRIP function.

2. Return to the **Print** menu and click on the **Separation Setup** button.

3. In the **Separation Setup** window most of the options are gray and not available. This is because a PPD has not been loaded yet that will tell Illustrator how to output color separations. Select Open PPD.



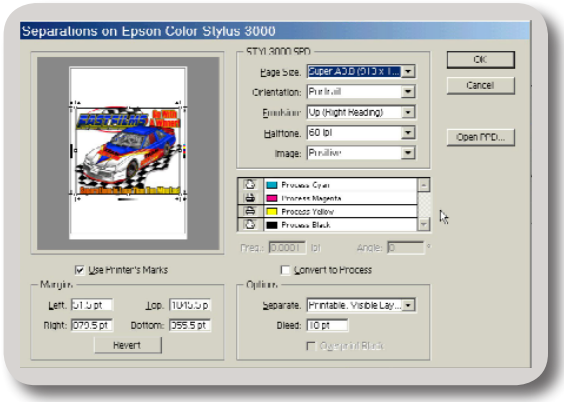
4. You will now need to select the Windows folder where the **PPD** file is located. FastRIP has placed PPD's on your hard disk in a *Printers* folder. You will find this folder in the *C:\FastRIP* directory.



Browse your local C: drive for the folder called FastRIP. Here you will find the Printers folder containing the PPD's.

5. The files are called STYL4000.PPD, STYL4800.PPD, STYL7800.PPD, etc. Locate the appropriate file that matches your printer and *double-click on* it.

6. Now when you click on the **Open** button, the **Separation Setup** menu shows all buttons, selection boxes and color options.



7. Put a **Printer Icon** next to the spot colors to print.

8. Set the page orientation under **Emulsion.** Set this to *Up* (Right Reading) and *Image* to **Positive**.

9. Adjust each spot color **Frequency**, **Angle and Dot Shape**.

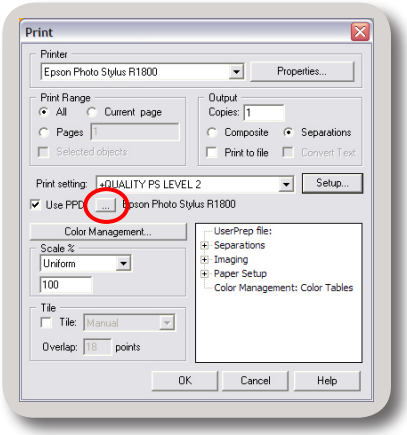
10. Click on *Print*.

11. Watch your image print… or start working on the next one.

Printing from Macromedia Freehand

While most graphics applications don't require the user to manually specify a **PPD** file for use when printing, similar to the older versions of Illustrator, Macromedia Freehand requires you have a **PPD** available. This is not a major issue and only requires a couple extra steps in the printing process to resolve.

In this section we will outline how to print from within Freehand.



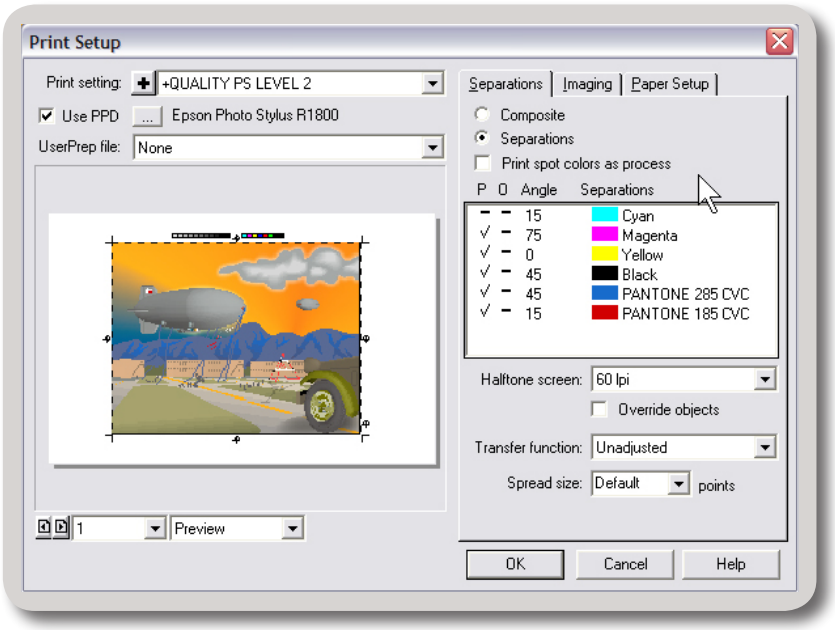
Click on the "three dots icon"(...) to browse for the PPD file

1. To print, select *File* > *Print*. Choose your FastRIP Epson printer and click on **Properties**. Set the **Page Size** and click on **Advanced**. Set your **Paper Size** and choose your FastRIP function.

2. Under **Print Setting**, select **+Quality PS Level 2**. Place a check by **Use PPD** and click on the box with the three dots immediately to the right. This will bring up a window as if you had double-clicked on the *My Computer* icon your desktop. In this window you will need to locate the directory *C:\FastRIP\Printers*. In this folder, locate the PPD file that matches your printer and select it.

3. Click on **Setup**.

4. Choose the **Separations** tab. Click on each spot color to set the angle.



5. Use the **Halftone** drop-down arrow to select **Other**. Set the LPI. Click on *Ok*.

6. Choose the **Page Setup** tab. Set the **Page Size** for the document.
7. Click on *OK* to **Print Setup** window.
8. You will now be able to print your film positives through FastRIP .

Printing Complex Files

Files created in Vector-based programs like Adobe Illustrator, Macromedia Freehand, CorelDRAW, or QuarkXPress can create complex files. FastRIP has an option called **Complex Line Art** that will send the data to FastRIP as one piece instead of in sections. Not all files will need the **Complex Line Art** option, but if your image has complex shapes, gradients, transparencies or heavy use of the mesh tool then you might wish to use the **Complex Line Art** option before printing .

To select the **Complex Line Art** option:

1. Open FastRIP .
2. Open your file in the graphics program.
3. Set up your separations for printing.
4. Go to *File* > *Page Setup* or *Print Setup*. Select the FastRIP printer. Click on *Ok*.
5. Go to *File* > *Print*. Click the **General** tab and select **Printer Extensions 2**. Bring **Current Settings** down for **Device Select**. Choose **Complex Line Art**.
6. Print the file through FastRIP .

NOTE: If the file still will not print, select one Spot Color to print and allocate more memory to FastRIP.

CHAPTER 8

FastRIP Print Options

Introduction

FastRIP has many different options that you can enable and control. This chapter will cover the basic controls and options features of FastRIP 10.0.

NOTE: If you always rely on your graphics application to open FastRIP you may experience occasional errors or output issues. For that reason, we recommend you open FastRIP before sending a Print command from your graphics application.

Print Controls

Starting and Stopping Print Jobs

When print jobs are received by FastRIP, they can be either printed immediately, or they can be collected for later printing. The main controls for controlling print jobs are the **Start Queue** and **Stop Queue** buttons (available from the FastRIP toolbar). The **Start Queue** and **Stop Queue** commands are also available under the **Queue** menu.

If the **Start Queue** button has been clicked, then print jobs will be printed immediately. If the **Stop Queue** button has been clicked, then print jobs will be held until manually released.

A held job can be printed by right-clicking the job and choosing **Print** from the context-menu. Alternatively, select the job and choose **Print** from the **Jobs** menu.

In addition to the **Start Queue** and **Stop Queue** buttons, the scheduling settings also control whether a job is printed or held. The scheduling controls are set via **Queue** menu >> **Properties** >> **Layout Manager** tab.

Cancelling a Print Job

1. Pause the job on the printer control panel.
2. In FastRIP 10, right-click the job and choose Abort.
3. Windows will open a Port Locked dialog. Do not close this dialog.
4. From the printer control panel, reset the printer. If there is no reset button (or procedure for resetting the printer), then turn the printer OFF. After powering OFF, power the printer ON after a short pause.
5. Return to the Port Locked dialog and click OK to continue.

At this point, the printer should be ready to process new jobs, and buffer data from the cancelled job will have been cleared.

Printing to a Hot Folder

The **Hot Folder** is simply a directory on the workstation hard drive that will be monitored for new print (i.e., PostScript) files. If any print files are placed in the directory, then these will be added to the queue as new print jobs.

Typically, the **Hot Folder** is used by other graphic designers on your computer network. They will copy their jobs into the **Hot Folder**, and your workstation queue will then be able to process those jobs. However, please note that other graphic designers will need the appropriate file access permission (as granted by your network administrator) to copy files into the hot folder.

In FastRIP, a hot folder is designated as follows:

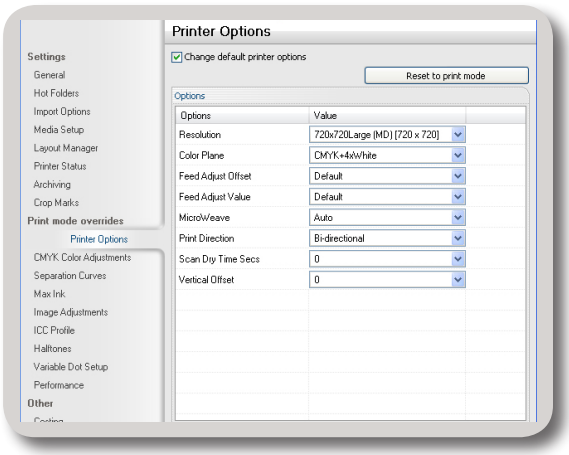
1) From the **Queue** menu, choose **Properties**.
2) On the **Queue Properties** dialog, click the **Hot Folders** tab.
3) Tick the **Enable queue hot folder** checkbox.
4) A browse dialog will open.
5) Choose a directory and click **OK**.

When a PostScript job is placed within the hot folder, FastRIP will use print mode settings that are contained within the PostScript file. If the print mode settings are missing or incomplete, then the Queue Properties will be used to complete missing settings.

Printer Options Tab

Queue Pull-down Menu>>**Properties**>>**Printer Options** tab

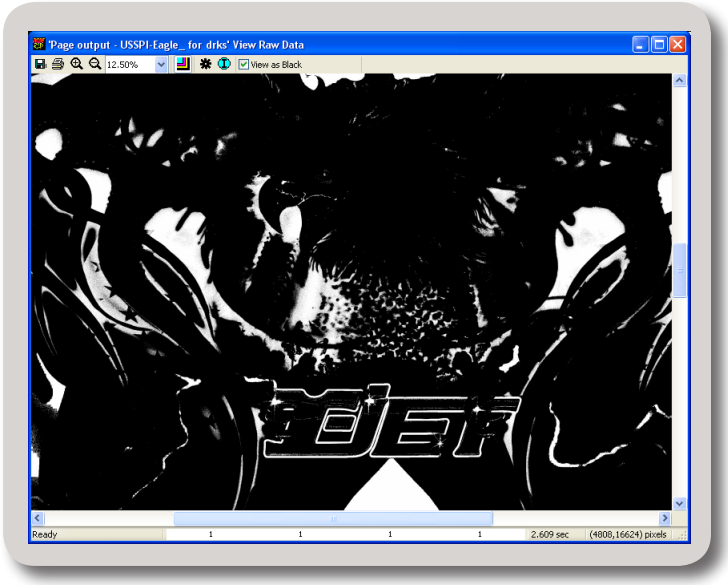
In the Queue Properties dialog, the Printer Options tab provides access to printer-specific options within the print mode. These printer-specific options are defined within the print mode, such as plane order, knife speed, etc. Please note that these options vary according to the printer model. For more information about these settings, please consult the operator manual that was provided with the printer.



Previewing Print Data - View Raw Data

Print data can be examined on-screen prior to printing. This is typically done in order to confirm the print data that is available in each color channel.

For example, suppose that a grayscale image needs to be printed, and the expectation is that only the black (K) channel will receive print data. This can be confirmed in the following manner:



1) Click the **Stop Queue** button to pause the grayscale-only print job in the queue.

2) Right-click the job and choose **RIP Only**. When the job has finished spooling, its Status will indicate "**Holding [Job spooled]**"

4) Right-click the job and choose **View RAW data**.

5) Click the **Plane Select** button. Each of the color channel checkboxes will be checked.

6) Untick the **Black** checkbox. The preview should now be blank because the CMY channels are not being sent data for a grayscale-only job.

Note: Colors appear differently on monitors than they appear when printed. As a result, the View Raw Data feature will not show colors on the screen exactly as they will appear when printed.

View Raw Data Window Options

In the View Raw Data Window, you will notice a toolbar offering several options. These options are outlined below.

Save

Select the Save button to save the picture as a bitmap image for comparisons or later viewing.

Print

Select the Print button to print the preview. For example, the preview can be printed to a desktop printer for use as a sample.

Zoom Tools

Select Zoom In, Zoom Out, or select a Percent Zoom to view the image as a whole, or particular sections within the image.

Color Planes

Clicking the Planes Select button opens the Select Planes to View dialog. The color channels used to print the image will be listed. Unchecking color channels is useful as a means of confirming the inks that will be used when rendering the image.

For example, suppose that a CMYK printer is being used to print a grayscale image using only the Black (K) channel:

1. Click the Plane Select button. Each of the color channel checkboxes will be checked.
2. Uncheck the Black checkbox.
3. The preview should now be blank because the CMY channels are not being sent data.

Substrate Color: The Substrate button (at the bottom) will open up a color picker window that indicate the media color. Alternatively, the color picker can be used to simulate different media colors.

1. Click the Background color picker.
2. Choose color that best matches the media color.
3. Click OK to view the spool data on the new media color.

Configuration

Click the Configure button to open the Preview Configuration dialog.

- Treat Process as Spot
  This option is typically off. However, when viewing color separations that are a combination of process and spot colors, setting this option = ON can help to obtain an improved view of the color blends.
- Show True Pixels Resolution
  Many printers have different horizontal and vertical resolutions. The image that appears in the viewer is automatically adjusted to account for this, when Show true pixels resolution is unchecked. Checking Show true pixels resolution will show the image without this automatic adjustment, which will cause the image to appear stretched.
- Cache Size
  If the viewer is drawing too slowly, and additional memory is available on the hard drive, then increase the size of the memory cache to increase the viewer speed.
- Units
  Select the units of measurement from the drop list (pixels, inches, or centimeters). The units of measurement appear in the bottom right corner of the View Raw Data dialog.

Image Information

Clicking the Image Info button will open an Image Info dialog. The dialog includes a list of information specific to the image including the printer, resolution, color planes, image size, and file location.

View as Black

Check the View as Black option to change the background color to white, and all other colors to black, within the image preview.

Variable Dot Halftone Previews

Variable dot halftone support is incorporated into the print modes provided with FastRIP. By applying one of the FastRIP-provided print modes, variable dot halftones will be automatically used with the given print job.

With respect to on-screen previews, note that a monitor display is not capable of previewing variable dot output because a monitor display contains only one size of pixel on-screen. Further, the limited number of monitor pixels may cause the preview to appear faded, though this fading will not be present in the actual print.

Archiving Print Jobs

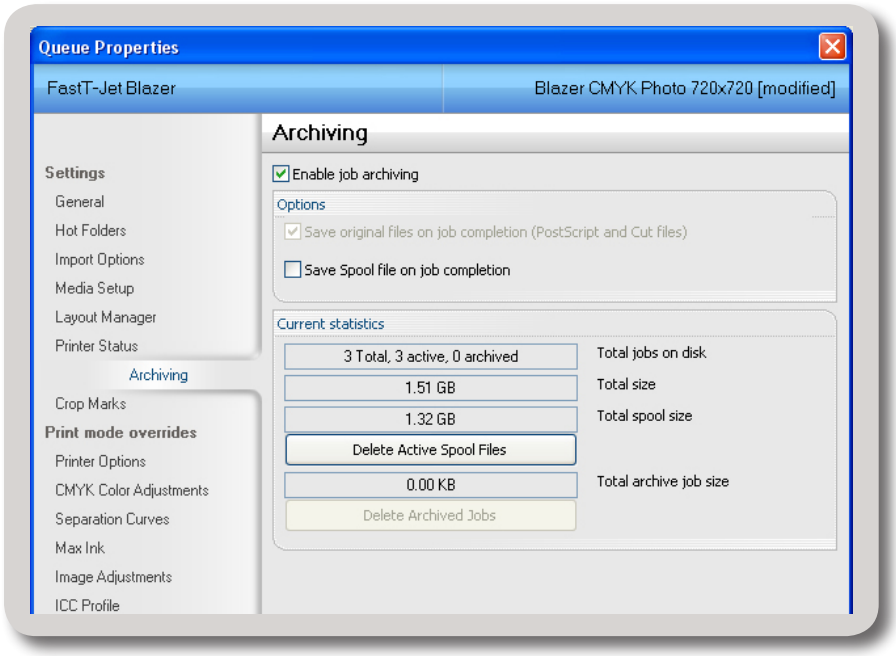
Print jobs can be archived as a combined JTB file that contains the job data and log data, such that the JTB can be safety stored (i.e., backups) and then restored at a later date, saving time from respooling a file as well as preventing any "guess work" in the job settings, etc. Archiving a job in this fashion is convenient because the log and notes related to the job are preserved, such that specifics about the job will be available upon restoration.

NOTE: keep in mind that spool files require relatively much more hard drive space than PostScript files.

Enable Archiving

Queue Pull-down Menu>>**Properties**>>**Archiving** tab

The Archiving tab in the Queue Properties dialog offers a few functions, one of which allows you to enable the Archiving function.

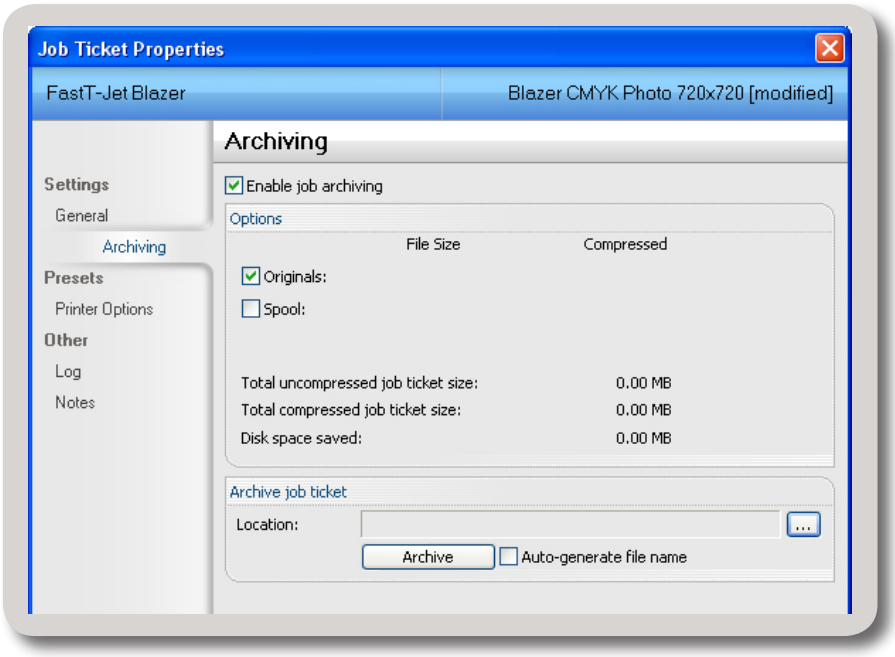


This dialog also gives you the option to save the spool file on job completion and gives statistics of how many jobs have been archived.

NOTE: You can also enable job archiving by right clicking on a completed job and selecting properties>>Show for page output (or Show for page content)>>Archiving tab.

Archiving a Job

1. Right-click the job and choose **Properties.** If the job has already been spooled (printed) a flyout menu will open; select either **Show for Page Output** or **Show for Page Content**. Both options will open the **Job Ticket Properties** Dialog. Note: if selecting **Show for Page Content**, there will be a few more options, such as compression settings etc. For typical output archiving, select **Show for Page Output.**



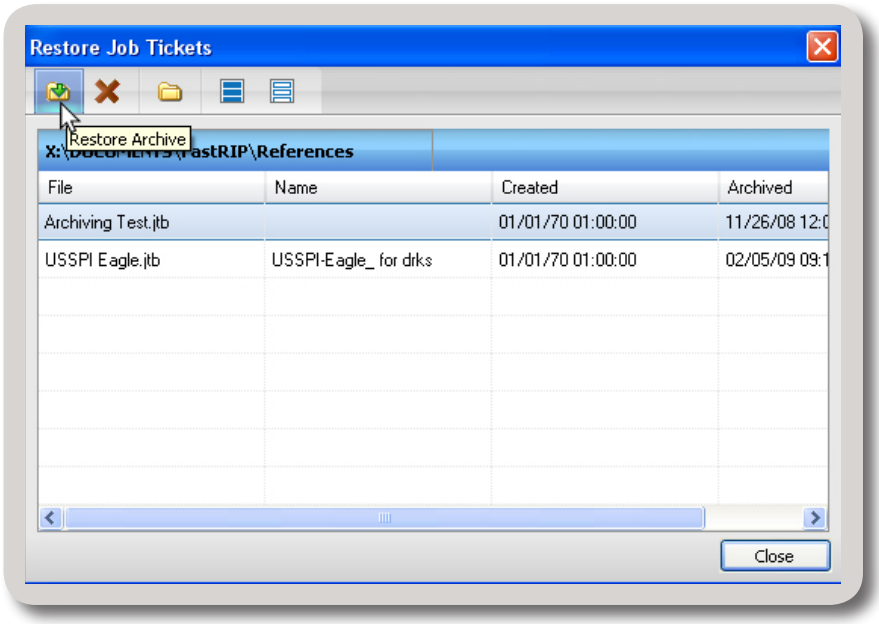
2. Select the **Archiving** tab.
3. Tick the **Enable job archiving** checkbox (if not already).
4. To cause the spooled print data to be included with the archive (optional), tick the **Spool** checkbox. Note that spool files are quite large in comparison to the corresponding original PostScript file.
5. Under Archive Job Ticket, confirm that the **Location** indicates where you want the archive file to be stored. To set the destination, click the ... button.
6. Click the **Archive** button.
7. You will be prompted to name the archive file.

The archive will now be created at the given location (stored as a JTB file type).

Restoring an Archived Job

Jobs Pull-down Menu>>**Restore Jobs:** The **Restore Job Tickets** dialog allows you to restore a selected job or multiple jobs, delete archives or browse other locations for archives saved in separate locations.

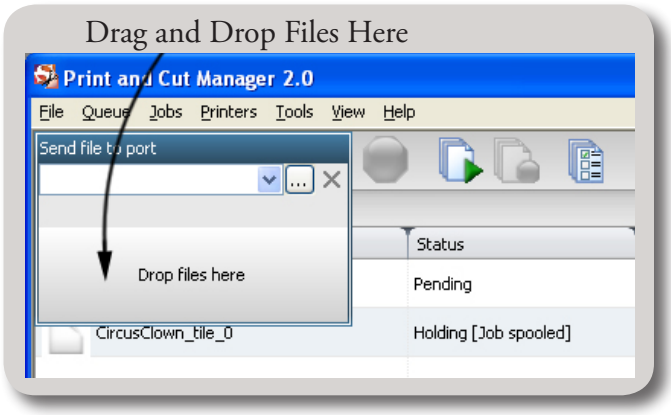
1. From the FastRIP window, select a **Queue Tab** to indicate which queue you want the job to be restored to.
2. From the **Jobs** Pull-down Menu, choose **Restore Jobs**.
3. The **Restore Job Tickets** dialog will open.
4. Select the job archive that you want to restore.
5. Click the **Restore Archive** button.
6. Click the **Close** button.



NOTE: The default list of jobs that appear in the Restore Job Tickets window will only reflect the location of the most recent archived job or jobs. To browse other locations, click the button.

Printing Direct To Port

Under the **Tools** menu, selecting **Direct To Port** will open a **Send to Port** dialog. Image files can be drag-and-dropped into this window to initiate a print job. The job will bypass the queue and be sent directly to whichever printer is connected to that port, without any processing.



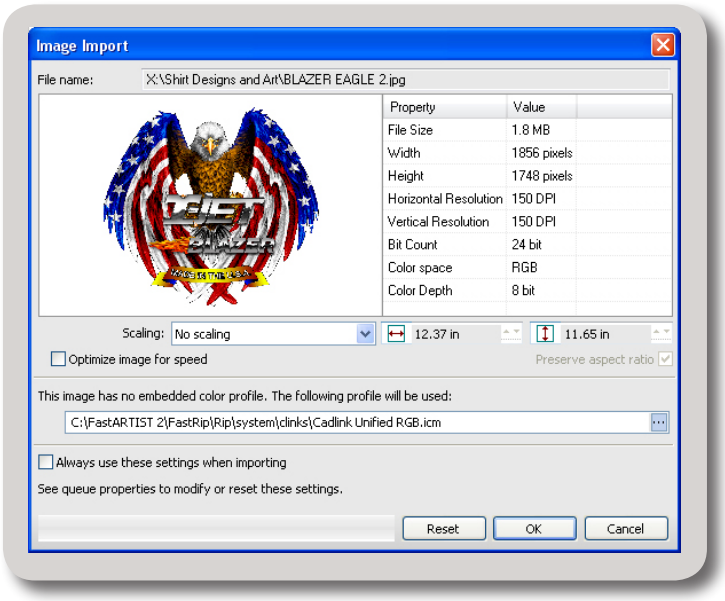
From the drop-list, select the port where the print jobs will be sent. To the right of the drop-list, click the ... button to edit the port settings.

Note: This is a quick, specialized method of sending a print job, such as testing output.

Importing a File and Import Options

From the FastRIP 10 toolbar, the Open button can be clicked to import an image file (e.g., EPS, BMP, TIFF, etc.) or you can select File>>Import.

Alternatively, an image file can also be drag-and-dropped onto the FastRIP 10 window, causing that file to be imported. In either case, the File Import Options are applied when importing the given file.

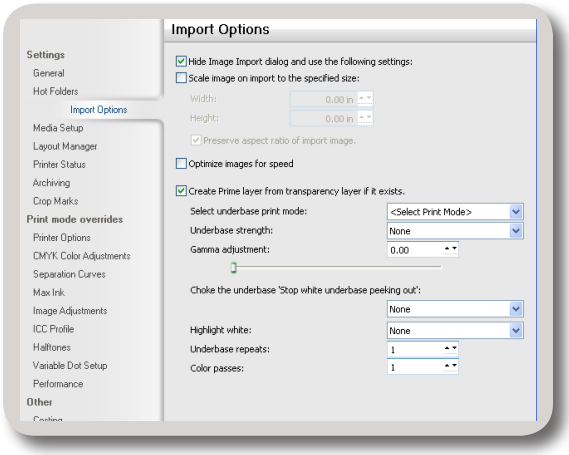


- **Scaling**:
  This Option lets you scale the image either by preserving the **aspect ratio** (checkbox) or changing it to fit your needs.

- **Optimize Image for Speed**:
  This option will downsize unnecessary file sizes in order to print faster.

- **Always use these settings when importing**: This option will allow you to use the same import settings for all file types.

  If checked, the Image Import dialog will no longer open every time you import an image. In this case, to gain access to this dialog in the future, go to Queue>>Properties>>Import Options tab.



  Uncheck the **Hide Image Import dialog and use the following settings** checkbox. This will gray out the screen and allow you to make the necessary settings each time you import an image into FastRIP.

NOTE: Refer to following section for addition Import Options.

Underbase Settings in FastRIP Using Transparent Images

Images saved with transparency can be output directly from FastRIP and the Underbase created automatically from the transparency information.

NOTE: You cannot create an Underbase using the File>Print method because the File>Print process flattens the file and loses all the transparency information.

FastRIP supports two methods of creating an Underbase.

- Windows Underbase that can be applied to any job by utilizing the application print options.
- Underbase from transparency, which can only be applied to bitmap images with transparency information (file types PSD, TIF or PNG)

While the Windows Underbase does allow you to work with any file type and from any program, the Underbase from transparency does offer major advantages such as choking / trapping the Underbase, Highlight White and blends between the graphics and the shirt.

NOTE: If using FastARTIST in conjunction with FastRIP 10, refer to the FastARTIST User's Manual for more Underbase Options.

Import Options and Settings

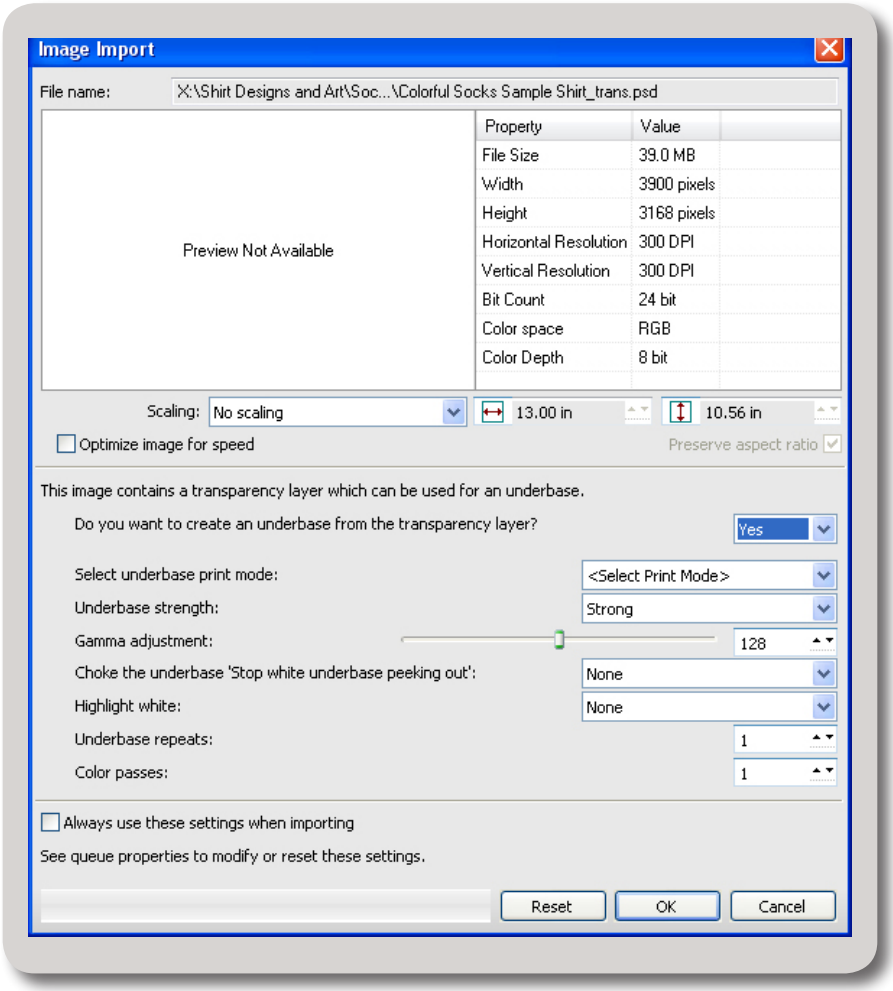
File>>Import

The **Image Import** dialog window opens anytime you import a job into FastRIP. This window allows control of the image and properties prior to importing. Since FastRIP 10 recognizes transparent files, the **Import Options** dialog will include extra options for the Underbase and other options such as passes and a highlight white option, when importing a transparent file.

1. In the FastRIP window, select **Import** from the File Pull-down Menu. Another way to import a file is to drag and drop the file directly into the queue active list.

NOTE: For Hot Folder options, see previous section, ***Printing from a Hot Folder***).

2. Select Yes to "**Do you want to create a Underbase from the transparency layer**".



NOTE: If you do not need an Underbase or do not care about the extra options, you can leave this as **No** and set the job up as if the file were a non-transparent image.

3. Select the **Underbase Print Mode** and other options.

Select Print Mode

Consult your Printer Manual for information on Underbase Print Modes.

Underbase Strength:

This has 4 settings for determining the Underbase to be created.

- **None**: Doesn't create an Underbase, would only typically be used if you just wanted a highlight white on the image
- **Minimum**: Converts the transparency information to an Underbase and then process's the Underbase to remove areas of the Underbase were the colors in the main image are black (as you do not need to print white under black).

The **Minimum** setting uses the least amount of ink for the Underbase and is equivalent to the **Normal Underbase** setting in the FastRTIST **Underbase Wizard**.

- **Medium**: Converts the transparency information to an Underbase and then process's the Underbase to remove areas of the Underbase were the colors in the main image are black (as you do not need to print white under black).

  The **Medium** setting is best at maintaining colors and darker shadows and is equivalent to the **Heavy Underbase** setting in the FastARTIST **Underbase Wizard**.

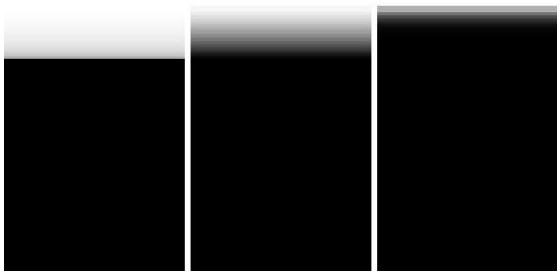
- **Strong**: Will create an Underbase from the transparency without modification.

Note: Medium is recommended setting, minimum will use the least amount of white ink.

Gamma adjustment

Gamma is another term for the levels adjustment found in programs like PhotoShop. **Gamma Adjustment** applies a gamma adjustment to the white Underbase either lightening or darkening the midtones and has a small proportional effect on highlights and shadows. 100% pure color and 0% pure color are not affected at all.

Gamma Adjustment is very useful for controlling the amount of white used when blending in a graphic with the shirt color and as an additional trapping tool. A low value will put down less white ink where the image is partially transparent, while a high value will put down more black ink in the same area.



This graphic shows the gamma effect on a white underbase gradient with values of 10, 128 and 245, so higher values will use more white under partial transparent areas (to much can create a white halo effect) smaller values will use less white and act as a choke on the white underbase in these areas. Too little and all that will show through though is the shirt color. Default is 128.

Choke the Underbase

The **Chock the Underbase** options have 5 different settings. These settings are used when the Underbase is created to choke / trap or shrink the white Underbase so that when printing, the white ink area is smaller than the color print area and stops any white showing due to registration or bleed problems.

- None – Applies no choke to the Underbase
- Minimum – Applies a choke of equivalent to 2 pixels at 720dpi
- Medium – Applies a choke of equivalent to 3 pixels at 720dpi
- Maximum – Applies a choke of equivalent to 5 pixels at 720dpi
- Extreme – Applies a choke of equivalent to 10 pixels at 720dpi

Note: The accuracy of the choke depends upon the resolution of the image, (see the AVI's on choking for more information), but typically you want 300/360dpi images to get a good accurate choke. If you choke too much, then it can cause other problems (most noticeable on lighter color shirts) and create what looks like a stroke color around the object. Best defaults are Minimum or Medium for Light color shirts and Medium or Maximum for Black shirts. You should only use this if you have registration issue between the white and color pass.

Highlight White

The Highlight White setting creates a highlight white to be printed as part of the color pass

- None – Doesn't create a highlight white
- Weak – Creates a weak highlight white, uses the least amount of white ink in white areas only.
- Medium - Uses more white ink for the highlight in areas of pure white. The medium setting is similar to the highlight white from the Normal Underbase setting in the FastARTIST Underbase Wizard
- Strong – Use 100% white ink in areas of pure white. This setting is similar to the highlight white from the Heavy Underbase setting in the FastARTIST Underbase Wizard

Note: Using to much white, especially in the color pass can cause your colors to become washed out. This happens when the White ink and color inks mix. Its best if you can avoid using a highlight white for DTG and get a good white underbase instead. If you do use this, use it sparingly to avoid color shifts, unless you are print just white objects.

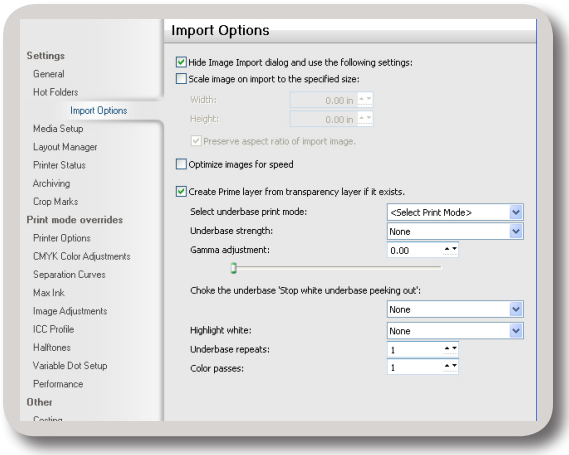
Underbase Repeats

Underbase Repeats is the number of Underbase passes to be printed.

Color Passes

Color Passes is the number of Color passes to be printed.

Always Use These Settings When Importing



This option will allow you to use the same import settings for all file types.

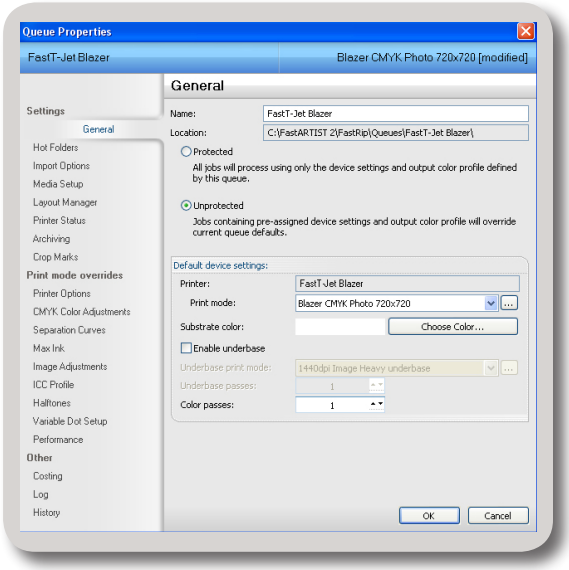
If checked, the Image Import dialog will no longer open every time you import an image. In this case, to gain access to this dialog in the future, go to Queue>>Properties>>Import Options tab.

Uncheck the "**Hide Image Import dialog and use the following settings"** checkbox. This will gray out the screen and allow you to make the necessary settings each time you import an image into FastRIP. You can also set a default in this window.

FastARTIST Jobs

Jobs from FastARTIST such as those created with the new Fluid Mask feature or PSD files imported into FastARTIST will have there underbase created in FastARTIST, so you will not see this dialog. But will have seen a similar dialog with the same options in FastARTIST when importing the image.

Changing The Print Mode For Color Passes



The **Print Mode** used for the color pass will be set using the print mode selected in the queue properties (Queue>>Properties>>General tab).

NOTE: You can change this for a particular job, by going to the job properties (right click on job and select properties).

If you want to setup a different default, then click the drop-down selection arrow under **Print Mode**. You can manually browse for a print mode by clicking the ... button.

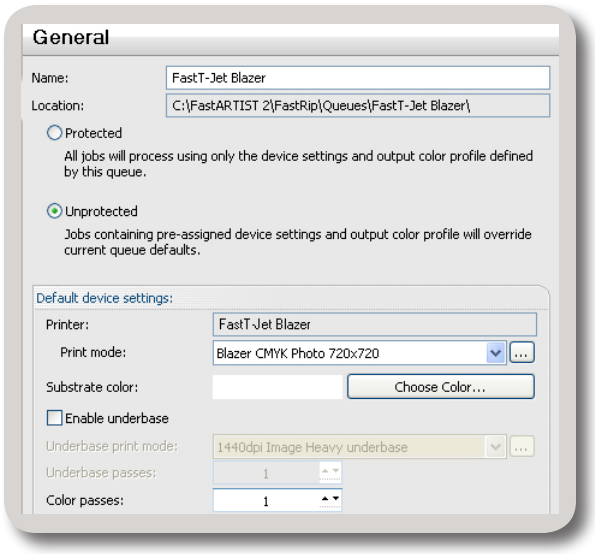
The new changes will then be used for all future imports.

IMPORTANT: The **Enable Underbase** checkbox is for the Windows underbase setting only. Do not use this option for images with transparency.

Setting up the Substrate Color

Queue Pull-down Menu>>**Properties**>>**General** tab

By default FastRIP will show you a preview of your image on a white shirt, but you can configure your queue for any color shirt. From the **Queue** Pull-down Menu, select **Properties** and click the **General** tab.



- Under **Default Device Settings**, **Substrate Color**, click on the **Choose Color...** button.
- Select any color from the color picker to use as your shirt color.

All previews will now be displayed with the newly selected background color (shirt color).

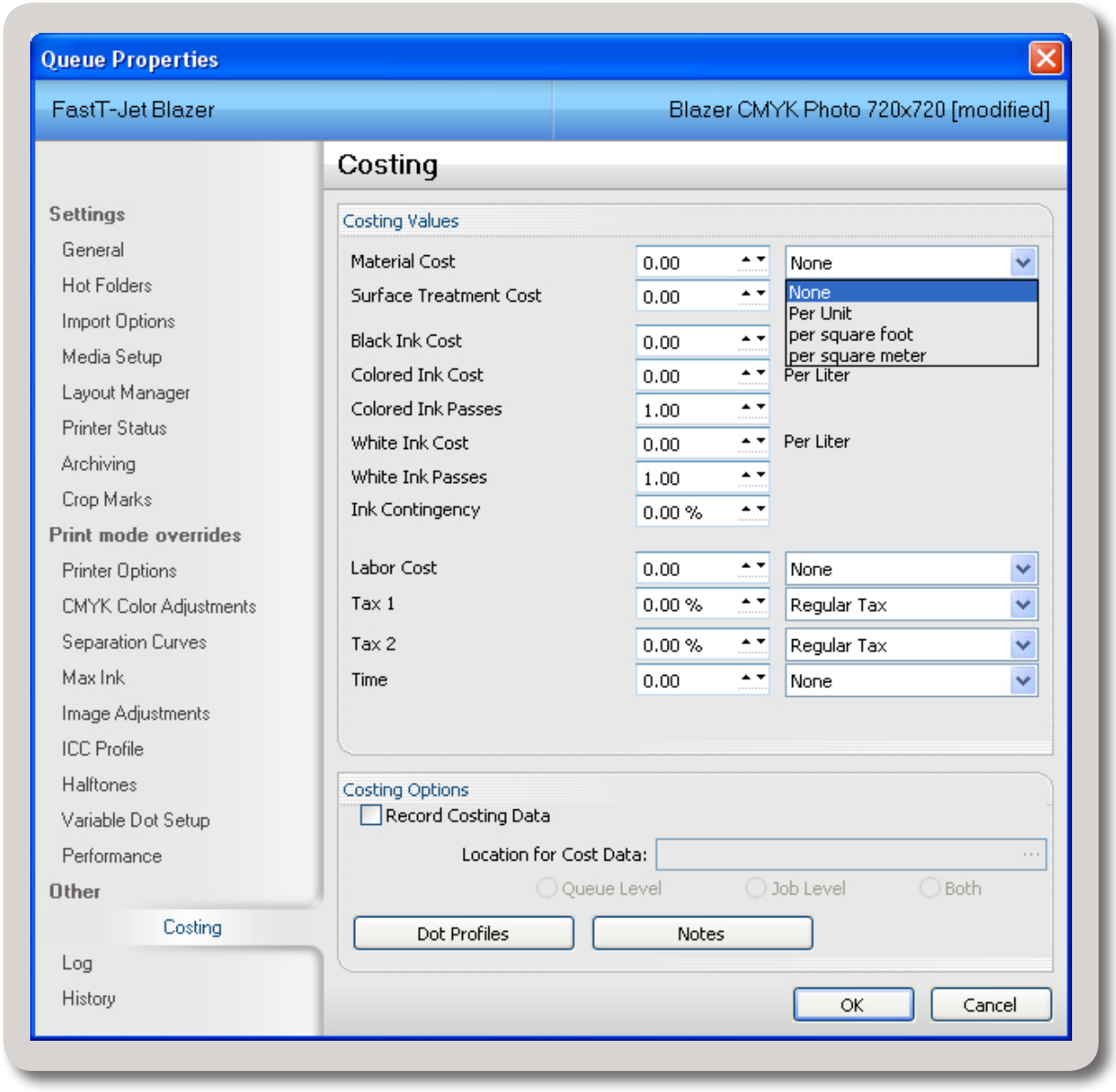
Note: If you select black and add a job with no underbase then it will display as solid black and you will not be able to see your image (just as it would print..).

Note: For the substrate color preview to work correctly, you must keep Preview Options set on 1-bit per pixel. See Tools - Options – Preview Options

Costing Interface

Queue Pull-down Menu>>**Properties**>>**Costing** tab

This new feature of FastRIP 10.0 allows you to keep track of costs in several different variables. To access the Costing Interface, select Queue from the Pull-down Menu and choose Properties. The Queue Properties window will open. Under the Other Tabs, select **Costing**.



Material cost

The material cost can be calculated in one of three ways using the drop down box.

- Per Unit
  A fixed price per print and typically used for T-shirts and other fixed price items when printing and will calculate the price using the value entered
- Per Square Foot
  This option, will calculate the price based on the actual area printed using the value per square foot.
- Per Square Meter
  This will calculate the price based on the actual area printed using the value per square Meter.

Surface Treatment Cost

This can be used for a number of different material treatments, such as a pre treatment for t-shirt printing or lamination in large format sign printing

- Per Unit, is a fixed price per print and typically used for T-shirts pretreatment and other fixed price items when the surface treatment is fixed or largely an estimated fixed price
- Per Square foot, will calculate the price based on the actual area printed using the value per square foot.
- Per Square Meter, will calculate the price based on the actual area printed using the value per square Meter.

Black, Colored and White Ink costs

This is always entered per liter, if you don't buy your ink buy the liter then you will have to calculate the per liter costs by dividing your volume purchased into a liter and multiplying this by your cost. Because on some printers Black ink is cheaper, black ink has been treated as a special case. Also on some machines White ink is more expensive so it also has its own separate costs from other colors used.

Notes

Allows you to add a text description, containing any notes you wish.

Color and White Ink passes

This is so you can enter the number of passes the printer makes when printing color pass or the white pass (if printing white). With some printers you select the number of passes when you print (or in the general tab), but some printers can control the number of passes internally. For this reason the number of passes you use with print jobs should be set manually in the costing interface and match the number of passes you use when you print.

Note: You can always change this on a job by job basis or you can setup different queues, say one for 2 white passes when doing black shirts and another queue with 1 white pass when doing lighter colored shirts.

Ink Contingency

With all inkjet printers, there is a certain quantity of ink waste that occurs during head cleaning and other routine maintenance tasks. The amount of ink used in these tasks will depend upon the printer and also the amount its used (the more you print, normally the lower the ink wastage as an overall percentage). Entering a % in this field will add this to the total ink used and effect the cost, so you can factor in the running costs including head cleaning and other maintenance.

Labor Cost

All printing requires some labour, from loading the materials, to pre treatments, lamination and packaging for shipping. You have three ways you can calculate this.

- Per Unit, is a fixed price per print and typically used for T-shirts and other fixed price items when the labour is typically the same for each item.
- Per Square foot, will calculate the price based on the actual area printed using the value per square foot.
- Per Square Meter, will calculate the price based on the actual area printed using the value per square Meter.

Tax 1

This allows you to apply a tax to the total cost of the job. Its added as a percentage of the total cost of the job

Tax 2

This allows you to apply a tax to the total cost of the job. Its added as a percentage of the total cost of the job when you select regular tax and is includes that costs of Tax 1 when you select Additive tax as in some countries / states.

Time

This does not effect the cost and is just for information purposes.

- Per Unit, is a fixed time per print and typically used for T-shirts and other fixed printing and application timed items.
- Per Square foot, will calculate the time based on the actual area printed using the value per square foot.
- Per Square Meter, will calculate the time based on the actual area printed using the value per square Meter.

Record Costing Data

You can select to record the costing information automatically, either at the queue level, job level or both. The data is then exported to this location in a .csv format, suitable for importing into Excel and relational databases for account and reporting. Using this feature you can further customise the costing as required. For example if you wanted you can use the information in Excel and add time as an additional cost item or process all jobs in a week and calculate total labor time.

Dot Profiles

In order for the costing to be calculated, it required that the software knows what the dot volumes are when printing and these will vary depending upon the resolution and other factors. This information is normally provided in the driver (when available). However you can change the dot volumes (based on a per print mode) and / or if they are absent, add your own estimates.

Note: Its often the case that different printing requires different costing, this can be from different material costs, labor costs, pre treatment costs. The benefit of using the multiple queue system is that you can setup different queues for these cases and enter different costing appropriately for the jobs.

Job Properties – Costing

In order to see the costing, you must first RIP the job (right click and RIP only), you can then see the costing tab in the job properties (Right click – properties – show properties for page content for singe jobs).

This costing will reflect the information entered in the queue properties, but it can be changed. For an example, if, for a particular job, you want to change the tax or ink contingency you can. You can also change the number of passes, if it differs from the defaults you setup in queue properties.

It is also possible to get a quick simple print of this information to your desktop printer or export the CSV file for use in another program.

CHAPTER 9

Print Modes and Printer Information

Print Mode Introduction

Each FastRIP **Print Mode** has been painstakingly crafted to obtain high quality output that takes into account the absorbency characteristics of the given media, so as to avoid under-inking conditions (i.e., pin-holing) and over-inking conditions (i.e., bleeding). As such, the expectation is that reliable reproduction will be obtained from your given model of Epson printer, per version of FastRIP.

There are 6 types of **Print Modes** available depending on your model of printer. Each type will have different versions or settings (such as Lines Per Inch - lpi) to choose from. Refer to your specific printer model in this chapter for more information.

- **FastRIP SD: Standard Density**
  The **Standard Density Print Modes** are the default modes for Current Settings and the settings you will use for most output. Use these modes for printing on clear film that is smooth or on waterproof inkjet film. These options may show more banding or streaking when used on poor quality film that has a rough surface.

- **FastRIP DD: Double Density**
  If you need a denser image, use this setting to print a heavier deposit of ink. **Double Density** works best on poor quality film but will lay down too much ink on waterproof film, such as FastPOSITIVE WP.

- **FastRIP TD: Triple Density**
  When printing with select printer models only, you will have the option of using a function called"**TD**" or **Triple Density**. These **Print Modes** work well on inexpensive film, however they have a significantly longer drying time.

- **FastRIP HS: High Speed**
  FastRIP allows you to print twice as fast by selecting **HS** (High Speed) mode. **High Speed** modes only come with a High Speed version of FastRIP and only work with select printer. In **HS** mode there might be a slight decrease in the amount of ink laid down and there could be minor registration issues on large prints.

- **Inkjet Proofing**
  These modes are only available for specific printers and are used to create custom proofs before printing. These modes are great for sending to the a client for final approval of a job.

- **Heat Transfers**
  Some model printers and versions of FastRIP support Heat Transfer Printing.

Setting Applying and Saving Print Modes

The following sections will cover using **Print Modes** and applying them to your designs, hassle free. Most of these methods are newly introduced in this version of FastRIP 10.0

Setting The Print Mode From The Print dialog

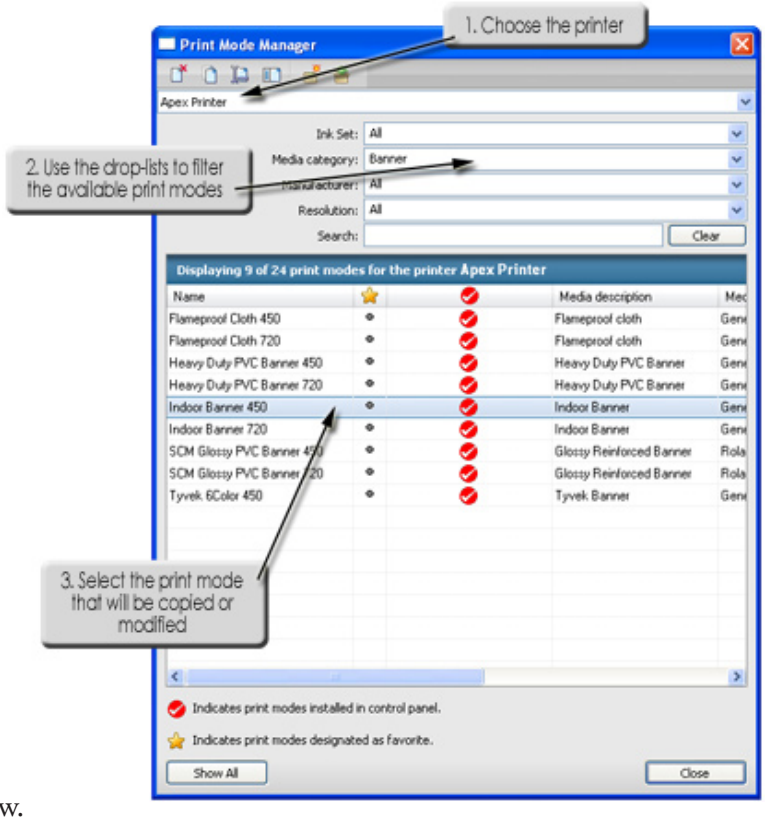
1) From your Windows graphic design application, choose **File** menu >> **Print**.
2) The **Print** dialog will open.
3) Choose the printer name from the drop-list.
4) The printer description should indicate that it is a "FastRIP" type of print destination, which indicates that print jobs will be processed through FastRIP.
5) If the printer description does not indicate "FastRIP," then search for another printer name from the drop-list.
6) Click the **Properties** button.
7) The **Properties** dialog for the driver will open.
8) Click the **Advanced** button.
9) The **Advanced Options** for the driver will open.
10) Click the **Document Options** >> **Printer Features** >> **Print Mode** field.
11) The **Print Mode** drop-list will become active.
12) Choose the **Print Mode** that is most appropriate for the type of job being printed. **Print Modes** are named according to media, print resolution, ink density, halftone frequency, and ink set.
13) Click **OK** to close the **Advanced Options**.
14) Click **OK** again to close the **Properties** dialog.
15) From the **Print** dialog, click **OK** to send the print job.

Changing the Print Mode Within a Held Print Job

Once a received job is held in a queue, the choice of **Print Mode** can be changed within the job properties.

1. Right-click the job and choose **Properties**.
2. The **Job Ticket Properties** dialog will open.
3. On the **General** tab, note the **Print Mode** field.
4. Next to the **Print Mode** field, click the ellipsis button.
5. The available **Print Modes** are categorized and named according to media, print resolution, ink density, halftone frequency, and ink set.

   You can also quick-select these with the drop-down arrow.



NOTE: If in doubt concerning an appropriate **Print Mode**, then a small print test is recommended.

Copying a Print Mode

If you would prefer to give custom descriptions or names to **Print Modes** to make it easier to remember which **Print Modes** are for what, the following methods should be used.

1. From the **Printers** menu, choose **Manage Print Modes** to open the **Print Mode Manager dialog**.
2. From the drop-list, choose the printer model. The **Print Modes** for that printer will then be listed.
3. Click the **Print Mode**, such that the name is highlighted.
4. Along the top of the **Print Mode Manager** dialog, click the **Copy Print Mode** button.
5. When prompted, type a meaningful name for the copy.

Editing a Print Mode

1. From the **Printers** menu, choose **Manage Print Modes** to open the **Print Mode Manager** dialog.
2. From the drop-list, choose the printer model. The **Print Modes** for that printer will then be listed.
3. Click the **Print Mode**, such that the name is highlighted.
4. Along the top of the **Print Mode Manager** dialog, click the **Edit Print Mode** button.
5. The Properties dialog for the **Print Mode** will open (see Queue Properties).

Setting the Default Print Mode Within FastRIP

If there is a **Print Mode** that you use most often, you can set this **Print Mode** as your printers default **Print Mode**, saving you time in the future of having to select it each time you set up a print.

1. From the **Queue** menu, choose **Properties**.
2. On the **General** tab, note the selected **Printer**.
3. In the following information box, set the queue to either **Protected** or **Unprotected** mode.
4. To the right of the **Print Mode** drop-list, click the ellipsis button to open the **Print Mode Selection** dialog.
5. Choose from the drop-list categories to narrow down the list of **Print Modes** (i.e., what ink set, what resolution, etc.).

Protected Queue Mode

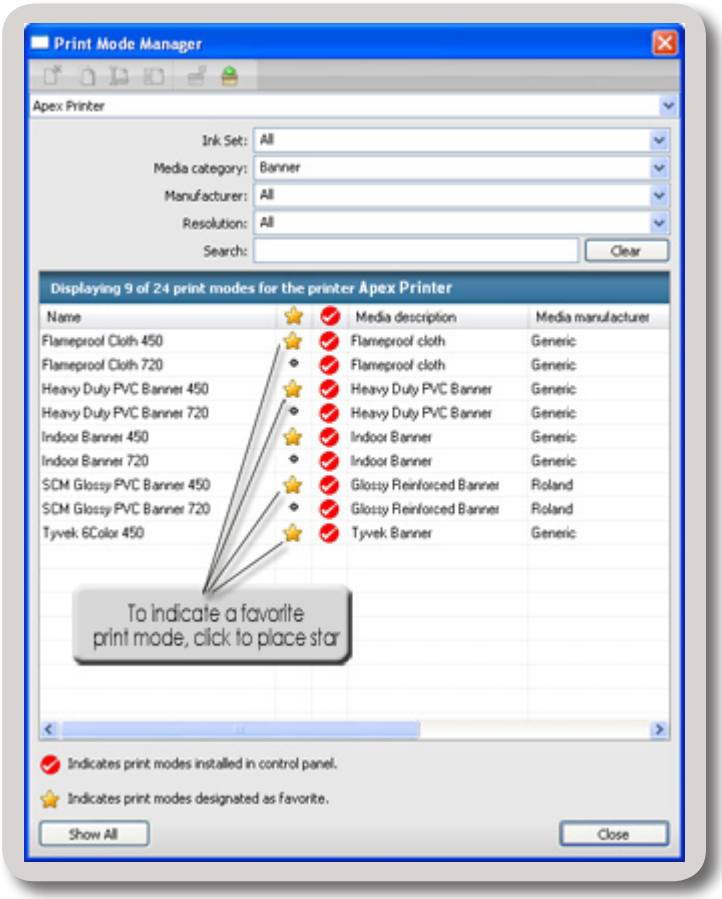
- On the **Queue** tab, **Protected** mode causes all jobs received by that queue to use the **Print Mode** that is set within that queue.
- For example, if you have a specific media loaded into the printer, then you likewise know the precise **Print Mode** that should be used with that media.
- For a designer that does not know what media is being used, their choice of **Print Mode** will be ignored in favor of the **Print Mode** that you know to be correct.

Unprotected Queue Mode

- On the **Queue** tab, **Unprotected** mode assumes more responsibility from the designer for choosing a **Print Mode** that is appropriate for their design.
- Letting the designer choose the **Print Mode** can be acceptable when they understand the loaded media and **Print Mode** choices that are available.

Marking Print Modes as Favorites

1. In the FastRIP 10 Queue window, choose Printers >> Manage **Print Modes**.
2. Next to the **Print Mode** names column, there is a "**Favorite**" column (as indicated by the 5-pointed star).
3. To mark a **Print Mode** as a favorite, click within the **Favorite** column.
4. Later, when using the **Print Mode Selection** dialog to choose a **Print Mode**, the "**Star**" column will indicate the **Print Modes** that are considered to be favorites.



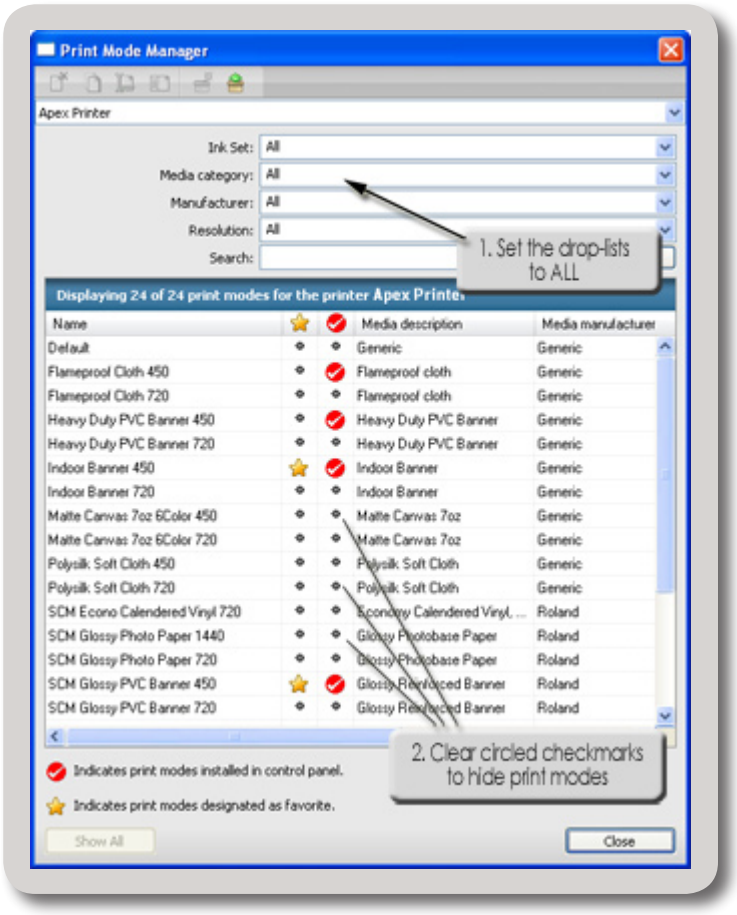
Hiding Print Modes

To prevent users from selecting the wrong **Print Mode**, the **Print Mode** Manager dialog can be used to hide **Print Modes**.

1. In the FastRIP 10 Queue window, choose Printers >> Manage **Print Modes**.
2. Set all of the drop-lists to "All," so that the full list of **Print Modes** are displayed.

Note: As a memory aid, it may be desirable to use the Favorites column to mark the **Print Modes** that will not be hidden in the subsequent steps

3. Next to the FavorItes column (the 5-pointed star), there is an "Approved" column (as indicated by the checkmark within a red circle).
4. By default, all of the **Print Modes** are approved.
5. To hide a **Print Mode**, click to remove the circled checkmark within the **Approved** column.
6. Click Close to finish editing the **Print Mode Manager.**



In FastARTIST, only approved **Print Modes** will be selectable via the Print and Cut Setup dialog.

In third-party graphic software applications, only approved **Print Modes** will be selectable via the Print dialog.

Overriding the Print Mode Setting of a Print Job

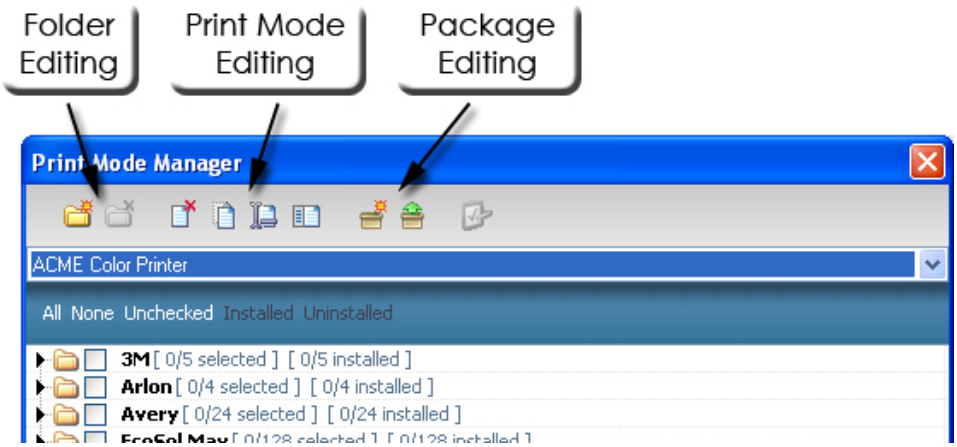
When a print job is being held in the queue, its **Print Mode** properties can be edited prior to print. These edits will apply only to the given job without changing the original **Print Mode**.

1. In the FastRIP 10 Queue window, click the **Stop Queue** button. This will cause new print jobs to be held pending.

2. Print a job to the FastRIP 10 Queue window.
3. The print job will now be listed in the FastRIP 10 Queue window.
4. Right-click the print job and choose **Properties**.
5. The **Job Ticket Properties** dialog will open.
6. Any changes to these dialog settings will override the **Print Mode** for this job.

Print Mode Manager Toolbar Options

Along the top of the dialog are several **Toolbar** buttons, which are used to rearrange, copy, edit, and organize a selected **Print Mode**. Please note that it may be necessary to create a copy of a **Print Mode** before it can be edited or moved.


Folder Editing
Print Mode Editing
Package Editing
Print Mode Manager
ACME Color Printer
All None Unchecked Installed Uninstalled
3M [0/5 selected] [0/5 installed]
Arlon [0/4 selected] [0/4 installed]
Avery [0/24 selected] [0/24 installed]

- **Folder Editing** refers to the folder icons that are used to indicate a category of **Print Modes**, such as from a specific manufacturer. After a folder has been created, your custom **Print Modes** can be dragged into the folder using the cursor.
- The **Print Mode Editing** tools are Delete, Copy, Rename, and Edit. Before editing or moving a preset **Print Mode**, it is necessary to make a copy of that **Print Mode**, which can then be edited.
- The **Package Editing** tools are used to export and import your custom **Print Modes**, such that they can be backed up or sent to another work-station. When creating a package, all of the custom **Print Modes** will be listed. Choose the **Print Modes** that should be added to the package, and then click Save.

Printer Specific Modes and Functions

The following sections will cover printer-specific **Print Modes** and other printer information that will help along the way of printing great film positives.

Epson R1400

The Epson Stylus Photo **R1400** is a pigment based printer that is capable of printing film positives on media up to 13" wide. The printable area is 12.5" in width by 19" in length. Below are some tips to assist in printing with the Epson R1400 printer and FastRIP.

Ink

The Epson Stylus Photo R1400 printer is shipped from the factory with UltraChrome (Pigment) inks. UltraChrome ink will ONLY work on waterproof film when printing film positives. UltraChrome ink will NOT adhere or dry on standard film transparencies.

However, U.S. Screen Print & Inkjet Technology has developed a dye based ink that will work with your printer when printing transparencies. This ink is called FastINK and it can be used to replace the UltraChrome **Black** cartridge. The **Black** ink is the only cartridge that need be replaced since film positives are only printed in black.

FastRIP Functions

FastRIP has a wide variety of **Print Mode** options for printing dense **Black** print on clear film for screen making. These are selected under the *Device Options* or *Advanced* menus in the *Properties Menu*.

Listed on the following pages are the available **Print Modes** *for the Epson 1400*:

General Film Output Print Modes for Epson R1400

- **Standard Density**
  1440 x 720 SD or 1440 x 1440 SD at 40 LPI
  1440 x 720 SD or 1440 x 1440 SD at 60 LPI
  1440 x 720 SD or 1440 x 1440 SD at 80 LPI

- **Double Density**
  1440 x 720 DD or 1440 x 1440 DD at 40 LPI
  1440 x 720 DD or 1440 x 1440 DD at 60 LPI
  1440 x 720 DD or 1440 x 1440 DD at 80 LPI

- **Triple Density**
  1440 x 720 TD or 1440 x 1440 TD at 40 LPI
  1440 x 720 TD or 1440 x 1440 TD at 60 LPI
  1440 x 720 TD or 1440 x 1440 TD at 80 LPI

High Speed Output Print Modes

FastRIP allows you to print twice as fast by selecting HS (High Speed) mode. In HS mode there might be a slight decrease in the amount of ink laid down and there could be minor registration issues on large prints.

- **High Speed Standard Density**
  1440 x 720 SD HS or 1440 x 1440 SD HS at 40 LPI
  1440 x 720 SD HS or 1440 x 1440 SD HS at 60 LPI
  1440 x 720 SD HS or 1440 x 1440 SD HS at 80 LPI

- **High Speed Double Density**
  1440 x 720 DD HS or 1440 x 1440 DD HS at 40 LPI
  1440 x 720 DD HS or 1440 x 1440 DD HS at 60 LPI
  1440 x 720 DD HS or 1440 x 1440 DD HS at 80 LPI

- **High Speed Triple Density**
  1440 x 720 TD HS or 1440 x 1440 TD HS at 40 LPI
  1440 x 720 TD HS or 1440 x 1440 TD HS at 60 LPI
  1440 x 720 TD HS or 1440 x 1440 TD HS at 80 LPI

Installing FastINK in Your Printer

1. Open the output tray, the printer cover and the cartridge cover.
2. Shake each unopened cartridge 4 or 5 times. Then remove them from their packages. (Don't shake them after removing the packaging)
3. Slide each FastINK cartridge into the appropriate slot with the **Green** circuit board facing the back.
4. Gently press down on the cartridge until it clicks into place.
5. Close the cartridge cover and printer cover.
6. Press the *Ink* button. The **Green** power and **Red** ink lights will flash for about 90 seconds as your printer charges its Print Head with the new ink.

Changing Ink Cartridges

After swapping out the UltraChrome ink, the printer's lines must be flushed completely of the old ink BEFORE printing film positives.

1. With FastINK in the **Black** ink slot, run 3 head cleanings through the Epson driver or by using the *Ink* button. Hold down the teardrop button for three seconds.
2. Create a solid **Black** box in any graphics application that is about 6" x 6" in size. Print **Black** box out on at least three sheets of paper to expend any remaining UltraChrome ink.
3. Repeat Step 2 again if necessary.

NOTES: If the printer is ON, push the tear drop button. This will slide the ink cartridges and Print Head to the left allowing easier access when changing ink cartridges.

If the printer is OFF, open the top cover. On the lower front left side of the Print Head is a white lever that is designed to prevent the Print Head from moving. Push the white lever toward the front of the printer, releasing the Print Head. Move the Print Head to the left for easier access when changing ink cartridges.

Shake all ink before inserting the cartridge into printer and remove the pull tab from the FastINK cartridge.

Film

FastPOSITIVE waterproof film will allow you to use a Dye based ink while giving you dense **Black** film positives.

- When loading paper in the sheet feeder make sure the sticky side is facing out of the sheet feeder.
- Because of the nature of the film, it is prone to double feeding (two sheets at a time). If you encounter this problem, load one piece of film at a time through the sheet feeder.

Loading Film

1. Slide the left edge guide to a width slightly greater than the width of your film.
2. Fan your film and place it in the printer, pressing it against the right side of the sheet feeder.
3. Slide the left edge guide to fit lightly against the film, ensuring the film lies beneath the arrow inside the left edge guide.
4. Pull out the output tray extensions.

R1400 Printer Tips

- Execute a Head Cleaning cycle on your printer each morning.
- If streaking occurs, do a Nozzle Check, Head Alignment and Head Cleaning from the standard Epson printer driver. You can perform up to TEN head cleaning routines in succession. Select your EPSON Stylus PHOTO R1400 printer and click on on **Properties** > **Printing Preferences**. Select the **Maintenance** tab.
- Cover your printer at night to prevent dirt and dust from fouling the Print Head.
- Remove all ink cartridges before moving the printer to a new location.
- Hold down the **Ink** button to move the Print Head for ink cartridge replacement.

Miscellaneous

- The imaging side of inkjet film is the sticky side if you touch it with a wet finger.
- Fan the sheets of film before loading them in the paper tray. It is best to feed film sheets one at a time.
- In high humidity conditions, do not stack output films before they are dry. You may use a hair dryer to speed the drying process.
- Handle film by the edges and store it in a cool, dry location.
- You may use a Film Opaque Pen to do minor touch-up work.

Troubleshooting

If the printer will not print:

Make sure a job is not hung-up in FastRIP. You can check the status of a print job in FastRIP's Queue Window. If a print job is listed as "Pending", go to the *Queue* menu and select *Start*.

The RIP or Printer Driver may not be set to correct port. Open FastRIP and go to *Printers/Manage Printers*. Select the *Epson 1400* printer. Change the port to match the one to which the Epson printer is connected. If you are using a USB cable, the correct port would be Epson Stylus Photo 1400_USB00*. *Click on Ok* and attempt to print again.

If the Green light (Power button) is blinking and nothing prints:

Ensure no ink cartridge lights are indicating an"empty' status on the printer. All empty ink cartridges need to be replaced before printing.

Open FastRIP and check the status of the job."Holding","Pending", or"Holding with Error". If listed as *Holding* or *Pending*, *right-click* on the job and select *Print*. If the job is listed as *Holding with Error*, *right-click* on the job and select *Remove*. Go to *Printers/Manage Printers* and ensure the correct port is being listed for connecting the printer and computer. Try printing the job again.

If the image prints outside the page border or is cut off:

Make sure that you have the *Page Size* set correctly within your application.

Epson 1520/3000

Epson Drivers for Windows

You must download the most recent Windows compatible driver for your printer at epson.com.

After you have installed the printer driver, add your printer through the Control Panel

1. Go to *Start* > *Control Panel* > *Printers and Faxes*.
2. Select *Add Printer*. Follow the on screen prompts.
3. Select your *Epson Stylus COLOR* **3000** *or* **1520** printer.

Feeding Film through Your Printer

The Epson 3000 and Epson 1520 printers have a sensor that identifies the media on which you are printing. If the printer feeds film without printing, the *Pause* light will come on. This means the print job is still in the printer queue, but the printer did not recognize the media. After adjusting the film, press the *Pause* button and the printer will feed the film through.

Here are some tips to help the Epson 3000 or Epson 1520 recognize film transparencies.

- Place additional sheets of film in the printer. For example, if you are printing a 6 color separation, put 8 sheets of film in the printer. Sometimes, if the film has built up a charge of static electrify, the printer may feed 2 sheets of film at a time. Shuffle and fan the film to reduce any static electrify.
- Place regular white paper beneath the sheets of film. This allows the Epson printer to recognize and feed the film.
- If the problem persists, dust or debris may be covering the sensor. Run a cleaning sheet through the printer. Cleaning sheets can be found at local computer stores.
- Place the film in the paper tray and send a print job. Hold on to the film and let the printer try to grab it. When the printer tries to grab the film a second time, release the sheet and the printer should feed the film.

Epson Stylus RIP

The Epson Stylus RIP is designed exclusively for color management and does not have the capability to print halftone dots. The Epson Stylus RIP may also cause conflict with the FastRIP. DO NOT install the Epson Stylus RIP. If the Epson Stylus Rip has been installed, you must uninstall the RIP before installing FastRIP.

Paper Settings

- Ensure the paper-release lever is set to"single sheet."
- Set the paper thickness to 0.
- If using roll film, set your printer to *Banner Mode*. Refer to the Epson User Guide for more details.

Epson R1800/2400

The Epson R1800 and R2400 are pigment based printers that are capable of printing film positives on media up to 13" wide. The printable area is 12.5" in width by 44" in length. Below are some tips to assist in printing with the Epson R1800 or R2400 printer and FastRIP.

NOTE: For best results when printing film positives, we recommend that you only use FastINK along with FastPOSITIVE WP film.

Ink

The Epson R1800 and R2400 printers are shipped from the factory with UltraChrome (Pigment) inks. UltraChrome ink will NOT work for printing film positives. UltraChrome ink will NOT adhere or dry on film transparencies.

However, U.S. Screen Print & Inkjet Technology has developed a dye based ink that will work with your printer when printing transparencies. This ink is called FastINK and it can be used to replace the UltraChrome **Black** cartridge. The **Black** ink is the only cartridge that need be replaced since film positives are only printed in black.

FastRIP Functions

FastRIP has a wide variety of **Print Mode** options for printing dense **Black** on clear film for screen making. These are selected under the *Device Options* or *Advanced* menus in the *Properties Menu*.

General Film Output Print Modes for Epson R1800 and 2400

- **Standard Density**
  FastRIP 720 SD 45 LPI
  FastRIP 720 SD 55 LPI
  FastRIP 720 SD 65 LPI

Epson 2200

The Epson Stylus Photo **2200** is a pigment based printer that is capable of printing film positives on media up to 13" wide. The printable area is 12.5" in width by 44" in length. Below are some tips to assist in printing with the Epson 2200 printer and FastRIP.

"Pizza Wheels"

The design of the machine's paper feed creates an inherent problem for the screen printer. Internal rollers create "tracks" on film, ruining the film positive. However, there is a very simple, inexpensive and reversible method of solving this problem. Visit our support section on www.screenprinters.net.

Another solution is to use waterproof film like FastPOSITIVE WP. Ink will adhere to and dry instantly on the film before it has a chance to get to the "pizza wheels."

Ink

The Epson Stylus Photo 2200 printer is shipped from the factory with UltraChrome (Pigment) inks. UltraChrome ink will NOT work for printing film positives. UltraChrome ink will NOT adhere or dry on film transparencies.

However, U.S. Screen Print & Inkjet Technology has developed a dye based ink that will work with your printer when printing transparencies. This ink is called FastINK and it can be used to replace the UltraChrome **Black** cartridge. The **Black** ink is the only cartridge that need be replaced since film positives are only printed in black.

FastRIP Functions

FastRIP has a wide variety of **Print Mode** options for printing dense **Black** print on clear film for screen making. These are selected under the *Device Options* or *Advanced* menus in the *Properties Menu*.

General Film Output Print Modes for Epson 2200

- **Standard Density**
  FastRIP 720 SD 45 LPI
  FastRIP 720 SD 55 LPI
  FastRIP 720 SD 65 LPI

- **Double Density**
  FastRIP 720 DD 45 LPI
  FastRIP 720 DD 55 LPI
  FastRIP 720 DD 65 LPI

- **Triple Density**
  FastRIP 720 TD 45 LPI
  FastRIP 720 TD 55 LPI
  FastRIP 720 TD 65 LPI

High Speed Output Prnt Modes for Epson 2200

- **High Speed Standard Density**
  FastRIP 720 SD HS 45 LPI

- **High Speed Double Density**
  FastRIP 720 DD HS 45 LPI
  FastRIP 720 DD HS 55 LPI
  FastRIP 720 DD HS 65 LPI

- **High Speed Triple Density**
  FastRIP 720 TD HS 45 LPI
  FastRIP 720 TD HS 55 LPI
  FastRIP 720 TD HS 65 LPI

Heat Transfer Print Mode

This setting is designed for standard T-Shirt heat transfer paper that has a coating on it. The print may appear slightly weak when printed but will get brighter when the transfer is applied to a shirt. This setting will also mirror (reverse) the image.

Proof Print Modes

- **FastRIP- Proof 45 LPI**
  Print a color calibrated paper proof with a 45 LPI halftone dot frequency applied to the image to simulate how the print will look when screen printed.

- **FastRIP- Proof 55 LPI**
  Paper proof at 55 LPI.

- **FastRIP- Proof 65 LPI**
  Paper proof at 65 LPI.
- **FastRIP- Generic Proof**
  Print a color calibrated Inkjet Paper proof. You can also use the standard Epson driver for this.

Using a Bulk Ink System with the Epson 2200

A *Bulk Ink System* comes in the form of easy-to-use 90 ml. bags for continuous flow printing. To get the best performance from your *Bulk Ink System*:

- Replace all of color the cartridges with special ”always read full” bulk cartridges.
- Conserve ink by keeping the printer ON when not in use. When the printer powers ON or when it’s performs a Head Cleaning cycle, it uses ink to prime the Print Head. (Always have extra cartridges available in case you run out of any inks.)
- Keep the ink bag at the proper height. When mounted correctly, the supply tube attached to the bulk bag should be about 2” above the print surface.

Installing FastINK in Your Printer

1. Open the output tray, the printer cover and the cartridge cover.
2. Shake each unopened cartridge 4 or 5 times. Then remove them from their packages. (Don’t shake them after removing the packaging)
3. Slide each FastINK cartridge into the appropriate slot with the green circuit board facing the back.
4. Gently press down on the cartridge until it clicks into place.
5. Close the cartridge cover and printer cover.
6. Press the ink button. The green power and red ink lights will flash for about 90 seconds as your printer charges its Print Head with the new ink.

Changing Ink Cartridges

After swapping out the UltraChrome ink, the printer's lines must be flushed completely of the old ink BEFORE printing film positives.

1. With FastINK in the **Black** ink slot, run 3 head cleanings through the Epson driver or by using the *Ink* button. Hold down the teardrop button for three seconds.
2. Create a solid **Black** box in any graphics application that is about 6" x 6" in size. Print **Black** box out on at least three sheets of paper to expend any remaining UltraChrome ink.
3. Repeat Step 2 again if necessary.

NOTES/TIPS: If the printer is ON, push the "tear drop" button. This will slide the ink cartridges and Print Head to the left, allowing easier access when changing ink cartridges.

If the printer is OFF, open the top cover. On the lower front left side of the Print Head is a white lever that is designed to prevent the Print Head from moving. Push the white lever toward the front of the printer, releasing the Print Head. Move the Print Head to the left for easier access when changing ink cartridges.

Shake all ink before inserting the cartridge into printer and remove the pull tab from the FastINK cartridge.

Film

FastPOSITIVE waterproof film will allow you to use a Dye based ink while giving you dense **Black** film positives.

- When loading paper in the sheet feeder make sure the sticky side is facing out of the sheet feeder.
- Because of the nature of the film, it is prone to double feeding (two sheets at a time). If you encounter this problem, load one piece of film at a time through the sheet feeder.

Loading Film

1. Slide the left edge guide to a width slightly greater than the width of your film.
2. Fan your film and place it in the printer, pressing it against the right side of the sheet feeder.
3. Slide the left edge guide to fit lightly against the film, ensuring the film lies beneath the arrow inside the left edge guide.
4. Pull out the output tray extensions.

Epson 2200 Printer Tips

- Execute a Head Cleaning cycle on your printer each morning.
- If streaking occurs, do a Nozzle Check, Head Alignment and Head Cleaning from the standard Epson printer driver. You can perform up to TEN head cleaning routines in succession. Select your **EPSON Stylus PHOTO 2200** printer and *click on* on *Properties* > *Printing Preferences*. Select the *Maintenance* tab.
- Cover your printer at night to prevent dirt and dust from fouling the Print Head.
- Remove all ink cartridges before moving the printer to a new location.
- Hold down the *Ink* button to move the Print Head for ink cartridge replacement.

Miscellaneous

- For best results you must use FastPOSITIVE WP film with FastINK. Regular Epson UltraChrome ink will not work for printing film positives.
- The imaging side of inkjet film is the sticky side if you touch it with a wet finger.
- Fan the sheets of film before loading them in the paper tray. It is best to feed film sheets one at a time.
- In high humidity conditions, do not stack output films before they are dry. You may use a hair dryer to speed the drying process.
- To make imaged films water resistant on non-waterproof films, spray them with an Artist's Fixative.
- Handle film by the edges and store it in a cool, dry location.
- You may use a Film Opaque Pen to do minor touch-up work.

Troubleshooting

If the printer will not print:

Make sure a job is not hung-up in FastRIP. You can check the status of a print job in FastRIP's Queue Window. If a print job is listed as"Pending", go to the *Queue* menu and select *Start*.

The RIP or Printer Driver may not be set to correct port. Open FastRIP and go to *Printers/Man-*

age Printers. Select the *Epson 2200* printer. Change the port to match the one to which the Epson printer is connected. If you are using a USB cable, the correct port would be Epson Stylus Photo 2200_USB00*. If you are connected via a Parallel cable, it would be will be LPT*. *Click on Ok* and try to print again.

If the Green light (Power button) is blinking and nothing prints:

Ensure no ink cartridge lights are indicating an"empty' status on the printer. All empty ink cartridges need to be replaced before printing.

Open FastRIP and check the status of the job."Holding","Pending", or"Holding with Error". If listed as *Holding* or *Pending*, *right-click* on the job and select *Print*. If the job is listed as *Holding with Error*, *right-click* on the job and select *Remove*. Go to *Printers/Manage Printers* and ensure the correct port is being listed for connecting the printer and computer. Try printing the job again.

If the image prints outside the page border or is cut off:

Make sure that you have the *Page Size* set correctly within your application.

Epson 4000

The Epson Stylus 4000 is a Professional Wide Format printer. Before configuring FastRIP, read the Epson Stylus Pro 4000 User's Guide for Print Head alignment, paper loading and printer management instructions.

FastRIP PRO version 10.0 for the Epson 4000 supports:

- PostScript Level 3 Images
- Printing images up to 17" in width and length
- Left and Right borderless bleed printing on certain page sizes

Requirements

FastRIP is a 32-bit Windows application. The following system configurations are the minimum requirements:

- A PC equipped with a Pentium processor 1.5 GHz or higher
- 512MB of RAM (1 GB or more is highly recommended. User's of the new Windows Vista OS should have 2 GB of RAM for proper functionality.)
- 200MB free hard drive space recommended
- FastRIP Pro will only operate on a Windows Vista/XP/2000 platform
- USB 1.1 port (high speed 2.0 recommended)

Processor Speed

Processor speeds will determine how fast files will be processed through FastRIP. If your processor is slow and the image is large and/or complex, it will take a long time for the job to be completed. Since most graphic intensive images qualify as large and complex, we recommend you have a fast processor. Simply stated, "The faster the processor speed, the quicker the file will print to the printer."

Installing Ink Cartridges

When setting up your printer, make sure the FastINK cartridge is inserted into slot #5. If the message "Wrong Ink" displays on the Epson 4000 Control Panel, look at the white sticker on the FastINK cartridge. The top line will start with"US....BLKD110***U***." If there is not a "U" at the end of the product code, contact the Support Department to exchange the FastINK cartridge. If you find an Epson Matte **Black** cartridge in slot # 5 of the printer, contact the Support Department to exchanged the cartridge for a FastINK cartridge that has a Matte Chip.

FastRIP PRO Print Modes - Epson 4000

FastRIP has a wide variety of output **Print Mode** functions, whether you want to print a full color proof on inkjet paper, a T-Shirt Heat Transfer or a dense **Black** print on clear film for screen making.

- **General Film Output Print Modes**
  FastRIP 720 SD - prints up to 65 LPI
  FastRIP 1440 SD - prints up to 65 LPI

FastRIP 2880 SD - prints up to 65 LPI
FastRIP 2880 SD85 - prints up to 85 LPI
FastRIP 2880 SD100 - prints up to 100 LPI
FastRIP 2880 SD133 - prints up to 133 LPI - use this mode for most output, including clear film that is smooth and waterproof inkjet film. This option may experience more banding or streaking when used on poor quality film that has a rough surface. This is the default for Current Settings.

FastRIP 720 DD - prints up to 65 LPI
FastRIP 1440 DD - prints up to 65 LPI - if you need a denser image, use this setting to print a heavier deposit of ink. Double Density works best on poor quality film but lays down too much on waterproof film. Use Standard Density for waterproof film.

- **Heat Transfer Print Mode - Epson 4000**
  This mode is designed for standard T-Shirt heat transfer paper that has a coating on it. The print may appear slightly weak when printed but will get brighter when the transfer is applied to a shirt. This setting will also mirror (reverse) the image.

- **Proof Print Modes - Epson 4000**
  FastRIP-Proof 45 LPI
  FastRIP-Proof 55 LPI
  Paper Proof at 55 LPI
  FastRIP-Proof 65 LPI
  Paper Proof at 65 LPI
  FastRIP- Generic Proof - Prints a color calibrated inkjet paper proof. You can also use the standard Epson driver for this.

- **CMYK Sublimation Mode**
  Since FastRIP uses the 5th photo **Black** slot for film, you can put standard sublimation ink in the left side CMYK ink slots and print sublimation transfers.

Epson 4000 Hint and Tips

- Service Req. error 00010007-This occurs when the **Green** tab becomes locked on the Print head. Lift the top lid of the Epson 4000, Locate the Print Head and pull this **Green** tab out. Turn the printer OFF then back ON.
- Film curl - If the film curls up, toward the ceiling, the Epson 4000 printer will have a difficult time recognizing the film. It helps to have the film lay flat or curl down, toward the floor. FastPOSITIVE has the correct curl.
- To Remove Jam or Reload film - On the rear of the printer is the Roller Release Lever. Pull the lever back, away from the printer. Now you pull out the film or straighten it. Once the jam is cleared or the paper is re-loaded, push the Release Lever forward.
- Reset - Sometimes it may be necessary to reset the printer. To do this, hold down the *Pause* button for 3 seconds.
- Clear horizontal lines through the image - If you have clear horizontal lines running through the image, a head cleaning will need to be performed. A general head cleaning can be done through the regular Epson driver. Resolving this issue may require up to 10 Head Cleaning cycles. If 10 head cleanings do not fix the problem, run a Power Cleaning. A Power cleaning is done from the interface of the Epson 4000 printer.
- To run a Power Cleaning, your ink cartridges need to be more than 50% full or you cannot run a Power Cleaning. The status of the printer must say *Ready*. On the printer interface, push the right arrow button or *Enter* button. Push the *Up* or *Down* arrow button until you see *Maintenance*. Push the right arrow button. Push the *Down* arrow button until *PWR Cleaning*. Push the right arrow button. Push the right arrow button again. Follow the menu messages.
- Excessive Dot Gain - If you have excessive dot gain in the halftones, run a head cleaning on the printer.
- Ink button light is solid Red - If the Ink button light is solid red, then one of the ink cartridges is empty. If any color ink cartridges read empty, you will NOT be able to print through FastRIP. We recommend you have extra color cartridges on hand.
- UltraChrome Ink - The Epson 4000 printer comes with UltraChrome (Pigment) ink. Pigment ink does NOT adhere to non-waterproof film. Pigment ink will only work with waterproof film like FastPOSITIVE WP film available from *U.S.*Screen.
- Maintenance Tank - We recommend you have an extra Maintenance Tank on hand. If the Tank is full, you will not be able to print using the Epson 4000 printer.

Printing Sheets

On the printer's LCD Display, ensure the status reads as *Ready*. Push the Right ARROW until *Printer Setup* appears. Push the Right ARROW again and then press the Down ARROW until you see *PPR Size CHK*. Push the Right ARROW button once and then press Down ARROW until you see the word OFF. Push the Right ARROW again and you will see an asterisk "*" next to OFF. The printer will now read what size of film is in the printer.

Halftone Frequency, Angle and Shape

FastRIP creates an excellent halftone at a line count of up to 133 lines per inch (LPI) using FastRIP Standard Density 2880 and a *round* dot shape. As you get higher than 133 LPI, slight banding may occur. This is due to the fact that at a printer resolution of 2880 x 1440 DPI, a higher line count will produce more gray levels.

FastRIP does a good job of creating whatever dot shape you set. While it has been a commonly held belief that an elliptical dot was better, you might find that with an inkjet printer, round is a better dot shape choice.

When printing halftone dots on or next to halftone dots, optical patterns can form called "Moiré Patterns." These patterns look like checker boards and are not desirable. To minimize Moiré Patterns, use a halftone angle of 25 degrees for all screens on photorealistic jobs. This is called "Simulated Process Color." For normal CMYK Process Color, try angles of **Cyan** 15, **Magenta** 45, **Yellow** 75 and **Black** 75 (Yes, the **Black** and **Yellow** are the same angles.)

Epson 4800 and 4880

FastRIP PRO version 10.0 for the Epson 4800 and 4880 support:

- PostScript Level 3 Images
- Printing images up to 17" in width and length
- Left and Right borderless bleed printing on certain page sizes

System Requirements

The Epson Stylus Pro 4800 is a Professional Wide Format printer. FastRIP is a 32-bit Windows application. The following system configurations are the minimum requirements:

- A PC equipped with a Pentium processor 1.5 GHz or higher
- 512MB of RAM (1 GB or more is highly recommended. User's of the new Windows Vista OS should have 2 GB of RAM for proper functionality.)
- 200MB free hard drive space recommended
- FastRIP will only operate on a Windows Vista/XP/2000 platform
- USB 1.1 port (high speed 2.0 recommended)

Processor Speed

Processor speed determines how fast files will be processed through FastRIP. If your processor is slow and the image is large and/or complex, it will take a long time for the job to be completed. Since most graphic intensive images qualify as large and complex, we recommend you have a fast processor. Simply stated,"The faster the processor speed, the quicker the file will print to the printer."

Color Images

The regular Epson driver for the Epson 4800 will NOT print color images correctly. To create film positives, U.S. Screen modified the placement of ink cartridges. The Epson 4800 requires the use of 2 ink slots for FastINK, slot # 5 (Light Black) and slot # 8 (Light Light Black). This causes color photographs to print dark in the gray areas.

Installing Ink Cartridges

When setting up your printer, make sure the FastINK cartridge is inserted into slot #5 (Light Black) and slot #8 (Light Light Black). If the message"Wrong Ink" displays on the Epson 4800 Control Panel, look at the white sticker on the FastINK cartridge. The top line will start with"US....BLKD110***U***." If there is not a"U" at the end of the product code, contact the Support Department to exchange the FastINK cartridge.

FastRIP PRO Print Modes - Epson 4800 and 4880

FastRIP has a wide variety of output **Print Mode** functions, whether you want to print on inkjet paper or create a dense **Black** print on clear film for screen making.

- **General Film Output Print Modes**
  FastRIP 720 SD at 45 LPI
  FastRIP 720 SD at 55 LPI
  FastRIP 720 SD at 65 LPI

FastRIP 1440 SD at 45 LPI
FastRIP 1440 SD at 55 LPI
FastRIP 1440 SD at 65 LPI - Use this mode for most output, including clear film that is smooth and waterproof inkjet film. This option may experience more banding or streaking when used on poor quality film that has a rough surface. This is the default for Current Settings.

- **High Speed Output Print Modes**
  FastRIP 720 SD HS at 45 LPI
  FastRIP 720 SD HS at 55 LPI
  FastRIP 720 SD HS at 65 LPI
  FastRIP 1440 SD HS at 45 LPI
  FastRIP 1440 SD HS at 55 LPI
  FastRIP 1440 SD HS at 65 LPI

- ***Proof and Heat Transfer* Print Modes**
  FastRIP does not support **Print Modes** for Heat Transfer or color Proofs on the Epson 4800 or 4880. Please check our website: **www.screenprinters.net** for updates.

Epson 4800 and 4880 Hint and Tips

- Service Req. error 00010007-This occurs when the Green tab becomes locked on the head of the printer. Lift the top lid of the Epson 4800 and locate the head of the printer and its bright green tab. Pull this green tab out. Turn the printer OFF then back ON.
- Film curl - If the film curls up, toward the ceiling, the Epson 4800 printer will have a difficult time recognizing the film. It helps to have the film lay flat or curl down, toward the floor. FastPOSITIVE has the correct curl.
- To Remove Jam or Reload film - On the rear of the printer is the Roller Release Lever. Pull the lever back, away from the printer. Now you pull out the film or straighten it. Once the jam is cleared or the paper is reloaded, push the Release Lever forward.
- Reset - Sometimes it may be necessary to reset the printer. To do this, hold down the *Pause* button for 3 seconds.
- Clear horizontal lines through the image - If you have clear horizontal lines running through the image, a head cleaning will need to be performed. A general head cleaning can be done through the regular Epson driver. Resolving this issue may require up to 10 Head Cleaning cycles. If

10 head cleanings do not fix the problem, run a Power Cleaning. A Power cleaning is done from the interface of the Epson 4800 printer.

- To run a Power Cleaning, your ink cartridges need to be more than 50% full or you cannot run a Power Cleaning. The status of the printer must say *Ready*. On the printer interface, push the right arrow button or *Enter* button. Push the *Up* or *Down* arrow button until you see *Maintenance*. Push the right arrow button. Push the *Down* arrow button until *PWR Cleaning*. Push the right arrow button. Push the right arrow button again. Follow the menu messages.
- Excessive Dot Gain - If you have excessive dot gain in the halftones, run a head cleaning on the printer.
- Ink button light is solid **Red** - If the Ink button light is solid **Red**, then one of the ink cartridges is empty. If any color ink cartridges read empty, you will NOT be able to print through FastRIP. We recommend you have extra color cartridges on hand..
- UltraChrome Ink - The Epson 4800 printer comes with UltraChrome (Pigment) ink. Pigment ink does NOT adhere to non waterproof film. Pigment ink will only work with waterproof film like FastPOSITIVE WP film from U.S. Screen.
- Maintenance Tank - We recommend you have an extra Maintenance Tank on hand. If the Tank is full, you will not be able to print using the Epson 4800 printer.

Printing Sheets

On the printer's LCD Display, ensure the status reads as *Ready*. Push the Right ARROW until *Printer Setup* appears. Push the Right ARROW again and then press the Down ARROW until you see *PPR Size CHK*. Push the Right ARROW button once and then press Down ARROW until you see the word OFF. Push the Right ARROW again and you will see an asterisk "*" next to OFF. The printer will now read what size of film is in the printer.

Halftone Frequency, Angle and Shape

FastRIP creates an excellent halftone at a line count of up to 65 lines per inch (LPI).

FastRIP also does a good job of creating whatever dot shape you set. While it has been a com-

monly held belief an elliptical dot was better, you might find that, with an inkjet printer, round is a better dot shape choice.

When printing halftone dots on or next to halftone dots, optical patterns can form called "Moiré Patterns." These patterns look like checker boards and are not desirable. To minimize *Moiré Patterns*, use a halftone angle of 25 degrees for all screens on photorealistic jobs. This is called "Simulated Process Color." For normal CMYK Process Color, try angles of **Cyan** 15, **Magenta** 45, **Yellow** 75 and **Black** 75 (Yes, the **Black** and **Yellow** are the same angles.)

Epson 7600/7800/7880 – FastRIP XL and Epson 9600/9800/9880 – FastRIP LF

FastRIP XL version 10.0 supports:

- PostScript Level 3 Images
- Printing up to 24" in width and length
- Left and Right borderless bleed printing on certain page sizes

FastRIP LF version 10.0 supports:

- PostScript Level 3 Images
- Printing up to 44" in width and length
- Left and Right borderless bleed printing on certain page sizes

The EPSON Stylus Pro 7880 and EPSON Stylus Pro 9880 are Professional Wide Format printers. Before setting up FastRIP, read the applicable Printer Guide for Print Head alignment, paper loading and printer management instructions.

System Requirements

FastRIP XL and LF are a 32-bit Windows application. The following system configurations are the minimum requirements:

- A PC equipped with a Pentium processor 1.5 GHz or higher
- 512MB of RAM (1 GB or more is highly recommended. User's of the new Windows Vista OS should have 2 GB of RAM for proper functionality.)
- 200MB free hard drive space recommended
- FastRIP will only operate on a Windows Vista/XP/2000 platform
- USB 1.1 port (high speed 2.0 recommended)

Processor Speed

Processor speed determines how fast files will be processed through FastRIP. If your processor is slow and the image is large and/or complex, it will take a long time for the job to be completed. Since most graphic intensive images qualify as large and complex, we recommend you have a fast processor. Simply stated,"The faster the processor speed, the quicker the file will print to the printer."

Installing Ink Cartridges

When setting up your printer, insert an Epson UltraChrome Photo **Black** (T-5433), Epson dye-based ink or FastINK cartridge in slot number 1.

Print Modes- FastRIP XL and FastRIP LF

FastRIP offers a variety of functions for output. These are selected from the *Advanced* menu in the *Properties* menu.

Specific **Print Modes** will need to be selected for the Epson 7800/9800 ink system. There are different **Print Modes** for use with UltraChrome inks and Photo-Dye ink. If you select the wrong **Print Mode**, you will receive a "Command Error" message in the printer interface window.

- **Epson 7600/7800/7880/9800/9880 with Photo-Dye ink**
  FastRIP XL and FastRIP LF have five functions for clear film output.

  Standard Density 720 Prints up to 75 LPI
  Standard Density 1440 Prints up to 100 LPI

Standard Density 2880 Prints up to 133 LPI
Double Density 720 Prints up to 75 LPI
Double Density 1440 Prints up to 100 LPI

NOTES: For a high quality film such as FastPOSITIVE, use the Standard Density setting. Films with a rough coating need a heavier deposit of ink in order to produce dense Black images- use the Double Density 720 or Double Density 1440 setting.

The higher the resolution the print, the slower the printer will output the file. If you need to print at a certain LPI, make sure to use the appropriate resolution.

- **Epson 7600/7800/7880/9800/9880 with UltraChrome ink**
  When using UltraChrome ink, FastRIP XL and FastRIP LF provide 10 output functions.

  FastRIP Generic-Ultra

  Standard Density Print Modes
  SD 720-Ultra
  SD 1440-Ultra
  SD 2880-Ultra

  Double Density Print Modes
  DD 1440-Ultra
  DD 720-Ultra

- **FastRIP Heat Transfer-Ultra**
  FastRIP XL is calibrated for most off-the-shelf, coated T-Shirt transfer paper. It does color correction and mirrors the image before output so it can be used with most T-Shirt Transfer papers from Canon, Avery, EPSON, etc.

- **Inkjet Proofs**
  Both FastRIP XL and FastRIP LF allow you to print a color calibrated inkjet proof to show a customer. You can print a standard inkjet proof or you can print a proof using standard halftone dot settings of 45 LPI, 55 LPI or 65 LPI to simulate the look of halftones when the image is actually screen printed. The halftone dot proof is much better to use than the regular inkjet proof because it provides the customer a truer representation of the final product.

FastRIP Proof at 45 LPI-Ultra
FastRIP Proof at 55 LPI-Ultra
FastRIP Proof at 65 LPI-Ultra

Halftone Frequency, Angle and Shape

Both FastRIP XL and FastRIP LF create an excellent halftone at a line count of up to 133 lines per inch (LPI). As you get higher than 133 LPI, slight banding may occur. This is due to the fact that at a printer resolution of 2880 x 1440 DPI, a higher line count will produce more gray levels.

FastRIP XL and FastRIP LF do a good job of creating whatever dot shape you set. While it has been a commonly held belief that an elliptical dot was better, you might find that with an inkjet printer, *round* is a better dot shape choice.

When printing halftone dots on or next to halftone dots, optical patterns can form called ”Moiré Patterns.” These patterns look like checker boards and are not desirable. To minimize *Moiré Patterns*, use a halftone angle of 25 degrees for all screens on photorealistic jobs. This is called ”Simulated Process Color.” For normal CMYK Process Color, try angles of **Cyan** 15, **Magenta** 45, **Yellow** 75 and **Black** 75 (Yes, the **Black** and **Yellow** are the same angles.)

Outputting from Applications

When using FastRIP XL ,select printer Epson Stylus Pro 7800-Full or Epson Stylus Pro 7800-Sheet. When using FastRIP LF, select printer Epson Stylus Pro 9800-Full or Epson Stylus Pro 9800-Sheet. The ”Full” is for full roll and the ”Sheet” is for sheet fed. Make sure you have installed both drivers.

CHAPTER 10

Output Settings

Introduction

This chapter will cover outputting your files to the printer and getting the correct results, such as line count, dot angle and dot size as well as color correction, adjustments and additional output features available with FastRIP 10.

Obtaining Photorealistic Prints

Screen printing of hand-drawn art is traditionally performed through the combination of spot colors, where each color is applied to a specific region of the substrate (i.e., paper, t-shirt, etc.). Having an overlap between color regions can be useful in achieving a specific visual result, or to create the appearance of more colors than the number of inks used.

For computer generated art and photographic images, the complexity of the artwork can produce difficulties in obtaining the desired quality. If the customer expects photorealistic prints, then using spot colors can risk a print that appears too posterized (e.g., splotchy with abrupt color shifts).

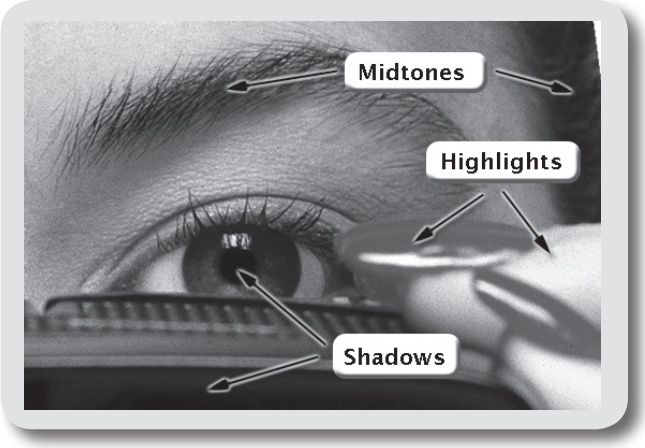
To produce photorealistic prints, a common technique is to prepare the artwork as a set of CMYK separations, which are then used to print the artwork on a 4-color press (i.e., spot cyan, spot magenta, spot yellow, and spot black). Overprinting these spot colors will reproduce the colors of the original artwork.

The printing of CMYK separations uses halftones, which are a classic printing technology that enables the printing of detailed images with a minimum of inks. Indeed, each color separation is a halftone.

- A halftone is a means of applying gradient dot patterns using a single ink, such that the dots form different shades (tints) of the ink.
- Where the dots are small, they will appear further apart, which produces a light shade of the color that is closer to the substrate color (i.e., a white or black shirt).
- Similarly, larger dots will appear closer together, which produces a darker shade that is similar to a solid fill of the ink.

Shadows, Highlights and Midtones

There are three distinct regions that are crucial to quality printing: Shadows, Midtones, and Highlights.



Shadows

The **Shadows** are the darkest regions of the image, where halftone dots are largest and risk blending together.

- On a tint scale of [0..100%], shadows would consist of (roughly) the **[85..100%]** tint region of the image.
- The challenge with shadows is that the dots blend together and obscure the darkest details of the image.

Highlights

The **Highlights** are the lightest regions of the image, where halftone dots are smallest and appear spaced apart.

- On a tint scale of [0%..100%], highlights would consist of (roughly) the **[0..15%]** tint region of the image.
- The challenge with highlights is that the individual dots, when used to expose emulsion, can be inadvertently washed away with the unexposed emulsion.
- It is often difficult to retain dots in the 5% range, and there are often challenges with any dots less than 10% tint.

Midtones

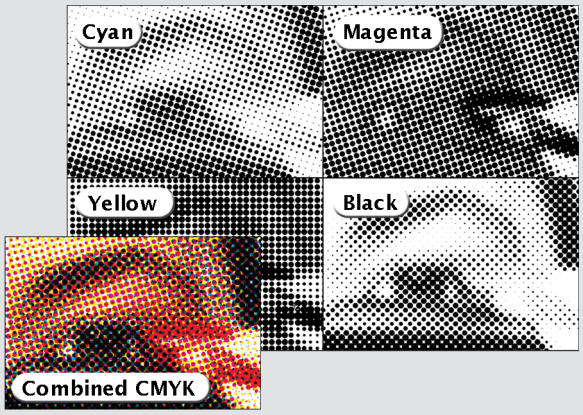
The **Midtones** are the mid-range regions of the image between the shadows and the highlights.

- On a tint scale of [0%..100%], midtones would consist of the **[15..85%]** tint region of the image.
- For midtones, the individual dots will vary according to the image details. A concern with midtones can occur when too much ink has been absorbed by the substrate, such that image details are lost (e.g., the detail in a person's hair, or the texture of a grassy field).

Choosing Halftone Settings

Each CMYK color separation has is its own halftone. As such, each separation will have its own shadows, midtones, and highlights according to the strength of that color component in the original image.

Each separation is like the dot pattern for the given color channel. Combining the separations reproduces the desired color image.



- During the final printing process, cyan ink is printed using the cyan separation, magenta is printed atop this with the magenta separation, and so on.
- Correct alignment of the separations is crucial to reproduce the original image.

Note: The actual order in which the colors are printed can vary. The general rule is that yellow is printed last to avoid obscuring the yellow halftone dots.

Depending upon the application, there can be several methods of producing CMYK color separations. When creating such separations, the halftone settings for each separation must be specified. The terminology can vary, but generally the halftone controls will be Dot Shape, Frequency, and Angle.

Dot Shape

Depending on the software application, there are a wide variety of shapes to choose for your halftone dots. The choice of shape depends on what you consider to produce good detail in your prints. For example, round and elliptical shapes are common, though test prints can determine whether other shapes are valid for a given artwork.

Frequency

The halftone frequency is measured in Lines Per Inch (lpi), which indicates the resolution of the dot shape.

- There is a **Ratio** between the frequency of your halftones, and the mesh count used when printing.
- As a rough guide for screen printing, this Ratio varies from 3 to 5, and it is used to avoid losing the highlight dots of the halftone. If unsure, then use a ratio of 4.

- If you have already chosen a mesh that is appropriate for your artwork, then the **Frequency** = Mesh Count / Ratio.
- Conversely, if you know the halftone frequency that is appropriate for your artwork, then the **Mesh Count** = Frequency * Ratio.

Note: When designing artwork in your graphic software application, the best image resolution can be determined by Resolution = Frequency * 2.5, which will help to avoid creating undersized dots in the highlight areas of the halftone.

Angle

To avoid unexpected patterns from appearing in the final print, each of the CMYK separations must be printed at a specific **Angle**. The choice of angles is quite subjective, though specific angles may be preferred according to the printing technology being used.

Offset Printing

As a starting point for comparison, a typical set of (CMYK) angles for **Offset Printing** is (108, 161, 90, and 45). Other combinations of angles can be equally valid, provided that consistent results are produced. For example, guidelines for other offset angles are:

- Black is always set at 45º
- The halftones should be offset by 30º from each other
- No two angles should be at right angles to one another (i.e. 90º between two halftone angles)
- To help prevent right angles, Yellow is set at 90º (i.e., 45º between Black and Yellow). Yellow is chosen for this angle because it is the least noticeable color at this angle

Screenprint and Flexography (Flexo)

In comparison to typical offset printing angles, here are typical (CMYK) angles used with screen printing in combination with flexographic techniques:

Cyan (C)	Magenta (M)	Yellow (Y)	Black (K)
7.5	37.5	22.5	67.5
22.5	52.5	7.5	82.5
20	50	5	80
22.5	112.5	52.5	142.5

- Spot colors are typically printed at the same angle as Yellow.
- Though screen printing typically makes use of an Elliptical dot shape, flexo generally uses a Round dot shape.

Lithography and Flexography

For lithographic techniques in combination with flexography, typical (CMYK) angles are:

Cyan (C)	Magenta (M)	Yellow (Y)	Black (K)
15	75	90	45
105	75	0	45
0	60	15	30
0	30	15	90

- Spot colors are typically printed at the same angle as Yellow.
- Flexo generally uses a Round dot shape.

T-shirt Graphics

Common (CMYK) angles for T-shirt printing are:

Cyan (C)	Magenta (M)	Yellow (Y)	Black (K)
15	45	75	75
22.5	52.5	82.5	82.5

- Though unconventional, good results are achieved by printing spot colors (including spot white) at an angle of either 15 or 22.5 degrees.
- Typically want to use an Elliptical dot shape.
- For an automatic press, use a Frequency of 65 lpi in combination with a 355 Mesh Count.
- For a manual press, use a Frequency of 55 lpi in combination with either a 305 or 330 Mesh Count.

Printing Separations

The creation of separations is enabled within your graphic software application. For best results, the halftone settings (angle, frequency and spot function) should also be set for each separation. Otherwise, FastRIP will use the black channel halftone that is defined within the print mode.

For the procedures in this section, the following is expected:

1. From the *Installing FastRIP* section, you have chosen the FastRIP-related printer driver within the application **Print** dialog.
2. From the *Media Profiles* section, you have chosen an appropriate print mode via the application **Print** dialog.
3. From *Appendix A - Printer Notes*, you have reviewed the comments about FastRIP print modes.

Note: The controls described in the following sections can vary between software versions. It may be necessary to refer to the documentation provided with your software.

Configuring PPD Files

A **PPD File** (PostScript Printer Description) describes the fonts, paper sizes, resolution, etc. for the given printer. Relatively new Windows applications will automatically load the PPD data. However, older Windows applications require the PPD file to be manually selected before preparing separations. For older Windows applications, the PPD file can be found within the FastRIP >> Printers directory.

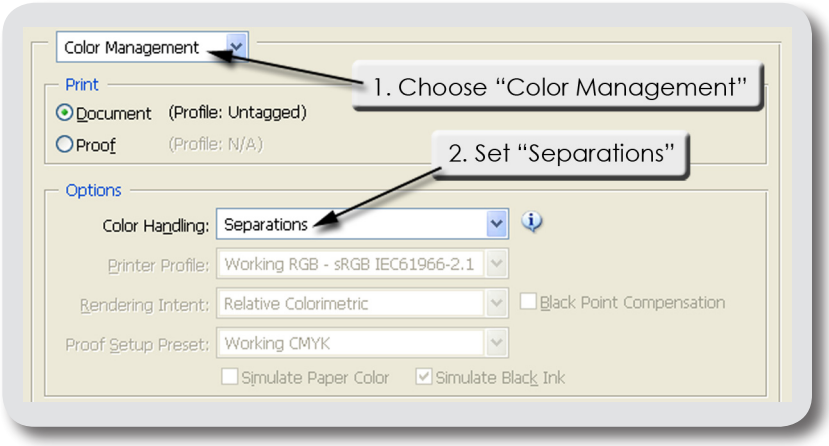
The following procedure provides an example of choosing a PPD file in Illustrator 10. This technique is similar to other (older) Windows applications.

1. From the **File** menu, choose **Print**.
2. Click the **Separation Setup** button.
3. The **Separations** dialog will open.
4. Click the **Open PPD** button. A Windows browse dialog will open.
5. Browse to the **FastRIP >> Printers** directory and choose the PPD file that corresponds to your printer.
6. Click the **Open** button. The view will return to the **Separations** dialog.
7. Note that the **Separations** dialog has now been populated with printer settings from the PPD file.

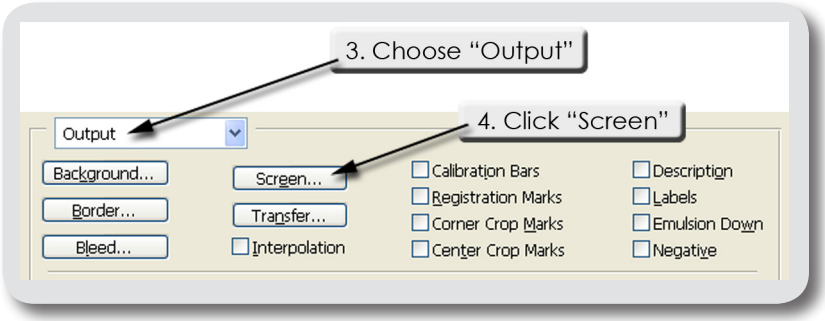
Separations in PhotoShop®

The following procedure was written using PhotoShop CS2. For other versions of PhotoShop, please refer to the PhotoShop help file or your software documentation.

1. Before creating separations, verify that the design is in either CMYK Color mode (for CMYK separations), or Multichannel mode (for CMY separations).
2. From the **Image** menu, choose from the **Mode** flyout.
3. Use the **Channels** palette to control which separations to print. The **Channels** palette is activated via **Windows** menu >> **Channels**. Click the eye icon beside each channel to show/hide its contents.
4. From the **File** menu, choose **Print with Preview**.
5. The **Print** dialog will open.
6. Use the **[More Options / Fewer Options]** button to show all of the dialog controls.
7. From the drop-list, choose **Color Management**. The "Color Management" controls will become available.
8. From the **Color Handling** drop-list, choose **Separations**.



9. From the drop-list (that currently reads **Color Management**), choose **Output**. The "Output" controls will become available.
10. Click the **Screen** button.



11. The **Halftone Screen** dialog will open.

- Use Printer's Default Screen = OFF (unchecked)
  It is recommended that you uncheck the **Use Printer's Default Screen** option. Doing so will enable the Halftone Screen controls and sets custom halftone settings for the print. Refer to the PhotoShop help file for an explanation of these controls.
- Use Printer's Default Screen = ON (checked)
  Enabling this option will cause FastRIP to use the halftone information from the print mode.

12. Click **OK** to close the **Halftone Screen** dialog.

13. Click the **Print** button to proceed.

Separations in CorelDraw®

The following procedure was written using CorelDraw X3. For other versions of CorelDraw, please refer to the CorelDraw help file or documentation.

1. From the **File** menu, choose **Print**.

2. The **Print** dialog will open.

3. Click the **Separations** tab.

4. Tick the **Print separations** checkbox.

5. Beside each color channel is a checkbox. Tick the channels that should be printed as separations.

6. The **Use advanced settings** checkbox determines how halftones will be applied, as follows:

- Use advanced settings = ON (ticked)

(Recommended) This enables custom halftone settings that can be adjusted by clicking the Advanced button. Refer to the CorelDraw help file for an explanation of these controls.

- Use advanced settings = OFF (unchecked)

This will cause FastRIP to use the halftone information from the print mode.

7. Once the **Print** dialog settings are ready, click the **Print** button to print the separations to FastRIP.

Separations in Illustrator®

The following procedure was written using Illustrator CS2. For other versions of Illustrator, please refer to the Illustrator help file or documentation.

1. Before creating separations, verify that the design is in CMYK color mode. From the **File** menu, choose **Document Color Mode >> CMYK Color**.
2. From the **File** menu, choose **Print**. The **Print** dialog will open.

   On the left-hand side of the **Print** dialog are several categories of controls. The categories are General, Setup, Marks and Bleeds, **Output**, Graphics, Color Management, Advanced, and Summary.
3. Click the **Output** category of controls.
4. Set the **Mode**, **Emulsion**, and **Image** according to your workflow.
5. Beside each color channel is a printer icon. Tick these icons to indicate the channels that should be printed as separations.
6. For each color channel, double-click to edit the halftone settings. Refer to the Illustrator help file for an explanation of these controls.
7. Click **Print** to print the separations to FastRIP.

Additional Output Features

Output Scheduling

Output scheduling is used to choose how jobs are scheduled when received by Visual Production Manager. Common scheduling scenarios are:

- For print jobs, spool print jobs as they are received, but holding the spool file until the appropriate media has been loaded.
- For print and cut jobs, printing the jobs as they are received, but holding the cut portion until the printed media has been loaded into the cutter.
- For print-laminate-cut jobs, holding the cut portion until after the printed media has been laminated.

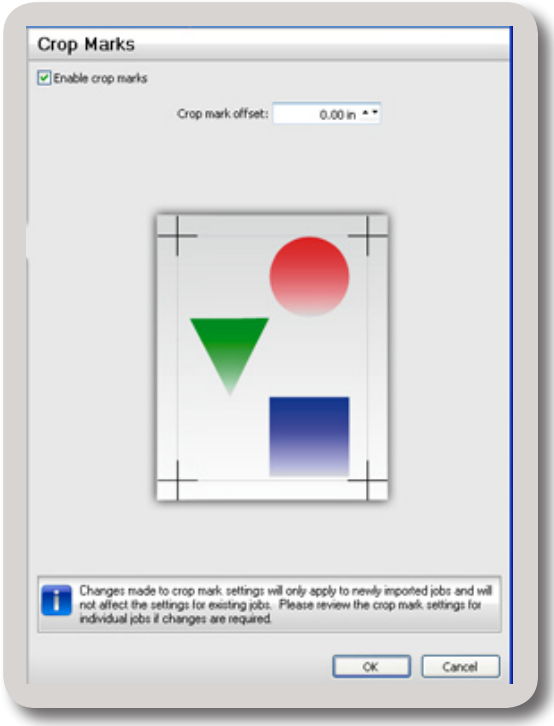
Note: If the queue is Stopped, then all jobs are automatically placed on Hold, regardless of the Output Scheduling settings.

Adding Crop Marks

Queue Pull-down Menu>>**Properties**>>**Crop Marks** tab

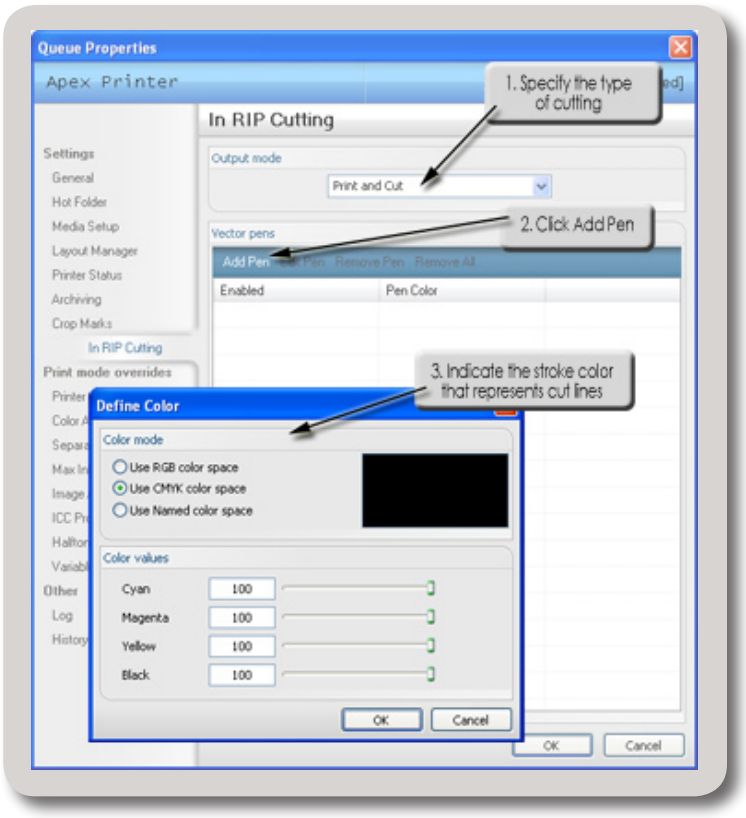
Crop Marks are standard registration symbols that are printed along the bounds of a print job, which can then be used for either cutter alignment, or aligning printed pieces in a layered assembly.

By default, the crop marks are flush with the job edge, though this can be varied by increasing the offset.


Crop Marks
Enable crop marks
Crop mark offset:
0.00 in
Changes made to crop mark settings will only apply to newly imported jobs and will not affect the settings for existing jobs. Please review the crop mark settings for individual jobs if changes are required.
OK
Cancel

In-RIP Cutting

Queue Pull-down Menu>>**Properties**>>**In RIP Cutting** tab



When printing from third-party software graphic applications like CorelDraw or Illustrator, the queue can be set to interpret line art (of a specific RGB or CMYK color) as being cutting path information. For example, cutting paths could be designated to be CMYK colors of 100% cyan, 100% magenta, 100% yellow, and 100% black. This color (100% CMYK Black) would be excellent because it is a color that is usually avoided in print jobs.

It is not possible to interpret color within a bitmap object as being cutting information. However, a bitmap can be imported into a vector-based graphics software application, and then a vector line (in the cutting color) can be drawn about the bitmap.

When specifying the color (RGB or CMYK) that will represent cutting lines in the job, choose a color that is not otherwise used in the original artwork. This color may then be added as an outline around the artwork, which will be cut after the illustration is printed. The cutting color itself is not printed.

Example of In-RIP Cutting

1. To perform **In-RIP Cutting** from a third-party graphic software application, the queue must be available as a print destination in the Windows Control Panel. Please refer to the Add a Printer to the Windows Control Panel section.
2. From the Queue Pull-down Menu, choose Properties>>**In RIP Cutting** tab.
3. From the Output mode drop-list, choose **Print and Cut**.
4. Click **Add Pen** to open the **Define Color** dialog.
5. Set a cut line color that will be unique (won't be confused with non-cut lines).
6. Click OK to close the Define Color dialog, and then click OK to close the Queue Properties dialog.

7. In CorelDraw or Illustrator, create a shape that will represent the cutting line.
8. Set the shape stroke color to the **In-RIP Cutting** color that was set in step 6.
9. From the File Pull-down Menu, choose **Print**.
10. In the Print dialog, select the appropriate printer and click **Setup**. You may need to click the Preferences button to access the Printer Preferences.
11. Click the **Advanced** button to access the **Advanced Options** for the printer.
12. Set the Cutter Control to Print and Cut.
13. Click OK to close each dialog.
14. On the main Print dialog, click Print to send the job.
15. The print and cut job will now be received in FastRIP.

Output Adjustments

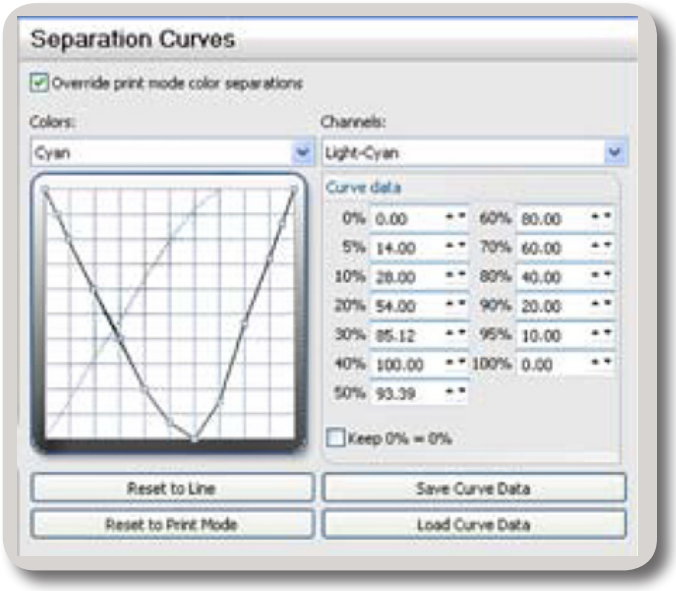
The following section will guide you through the process of adjusting the output, whether it is a density, highlight, ink or profile adjustments. You should use the "Printing a Test Page" feature to test your results. Refer to ***Printing a Test Page***, later in this chapter.

Separation Curves

Queue Pull-down Menu>>**Properties**>>**Separation Curves** tab

Some printers are capable of printing a wider range of color hues for cyan, magenta and black, by mixing inks of the same hue together. For example, a printer might use two inks, cyan and light cyan, or three inks, light, medium, and dark cyan. By using two or three different inks of cyan, and mixing them together, the color is adjusted to give the maximum range of color density. For these printers, the color calibration is adjusted automatically so that the correct amount of ink is used for each color plane, for example cyan and light cyan.

For this example, the default print mode settings are shown for the selected printer. The straight line on the graph represents cyan, while the curved line represents light cyan. The percentages of cyan ink are shown in the Curve data section.



- The x axis (horizontal line) represents the percentage of ink input into the curve data (for example, to get 50% cyan).
- The y axis (vertical line) represents the percentage of ink output from the particular printer in order to get the ink density requested through the curve data input.
- The top right corner of the graph represents 0, 0 where no ink has been input or output.
- The bottom left corner of the graph represents 100,100 where maximum ink has been output.

NOTE: Changing the separation curves will invalidate the color adjustment settings for the corresponding curves. The color adjustment settings will likely require adjusting following any changes to the separation curves.

Color Adjustment (Shadows, Midtones and Highlights)

Queue Pull-down Menu>>**Properties**>>**CMYK Color Adjustments** tab

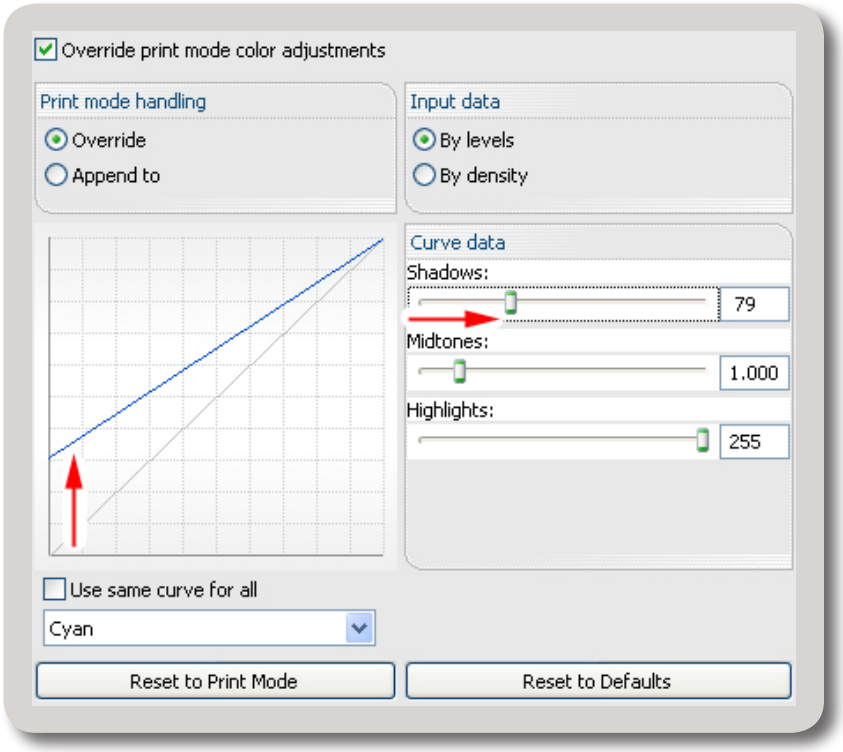
The **CMYK Color Adjustments** tab adjusts the color levels of the print job. These adjustments are not typically required because the ICC profile is created for use with a specific calibration. As such, performing color adjustments will actually distort the color accuracy of the ICC profile. One reason for color adjustments would be to create an artistic effect.

The Shadows Slider

The **Shadows Slider** adjusts the black point, which is the lower end of the curve. Increasing the Shadows value causes the darkest parts of the print to be recognized as pure black, which also causes the darkest details to be lost in the shadows.

Generally, the purity of printed black depends on many factors, such as how many colors are being used.

Use the mouse to adjust the Shadows slider.

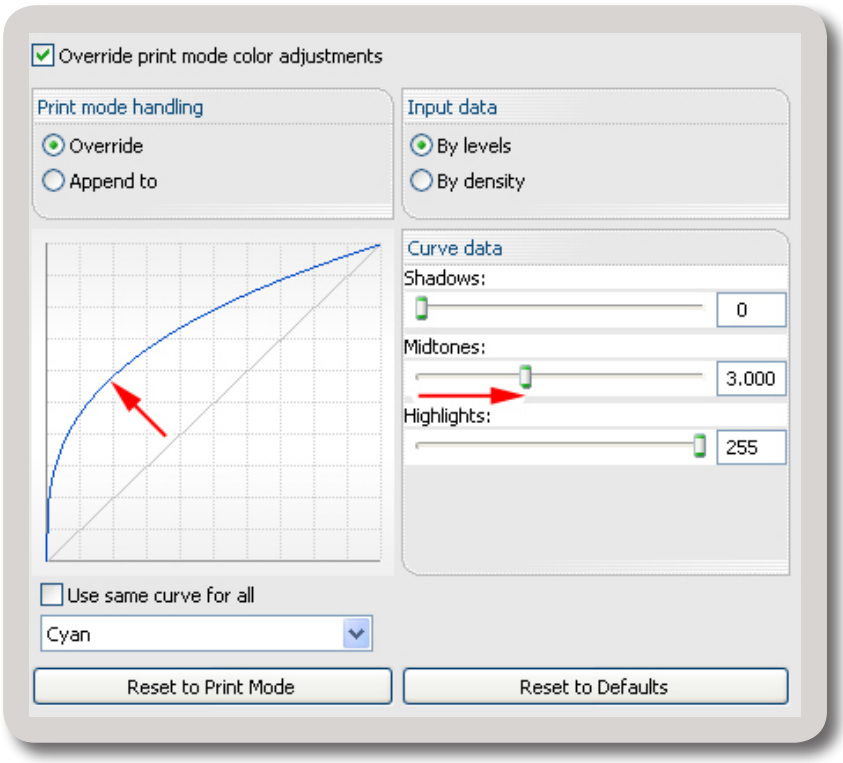


The Midtones Slider

The **Midtones Slider** adjusts the gamma curve, which affects the midtones without changing the black and white points (the lower and upper ends of the curve, respectively).

Raising the midtone of a color plane results in laying down less ink on the media for that color.

Use the mouse to adjust the Midtones slider

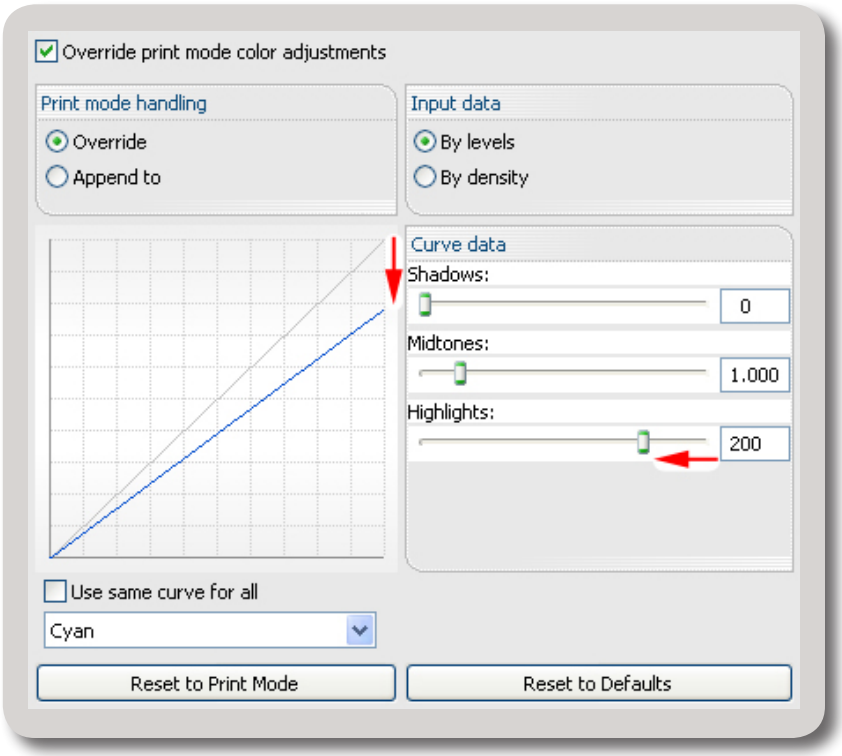


The Highlights Slider

The **Highlights Slider** adjusts the white point, which is the upper end of the curve.

Lowering the Highlights value causes the lightest parts of the print to be recognized as pure white, which causes the lightest details to be lost in the highlights.

Use the mouse to adjust the Highlights slider.

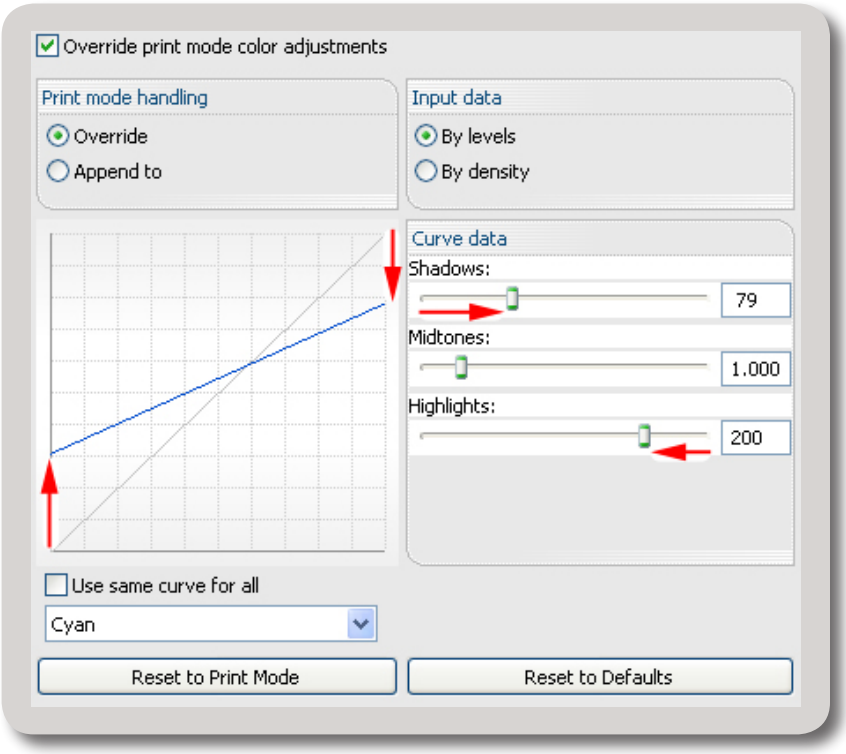


Multi-adjustments

When both Highlights and Shadows are adjusted, the contrast between light and dark areas will be more pronounced. However, light and dark details will be lost as those tones were forced to either 0% or 100%.

The **Highlights** and **Shadows** controls are useful for preserving details on printers that are incapable of differentiating the darkest and lightest pixels accurately.

By adjusting the white and black point values, more of the image details will fall within the range that the printer is capable of rendering.



Density Curve

The Density Curve is used to set densitometer values for each color plane.

This curve is similar to using the X-Rite colorimeter, though lower-cost hand held devices may instead be used, and the data must be entered manually.

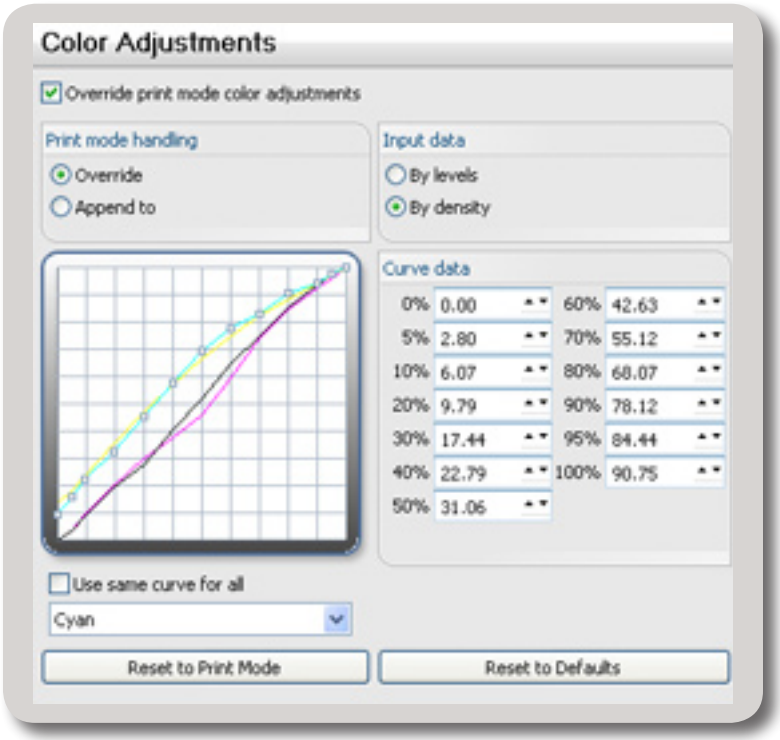


Image Adjustments

Queue Pull-down Menu>>**Properties**>>**Image Adjustments** tab

The **Image Adjustment** tab provides some additional controls for improving the image quality of the printed output.

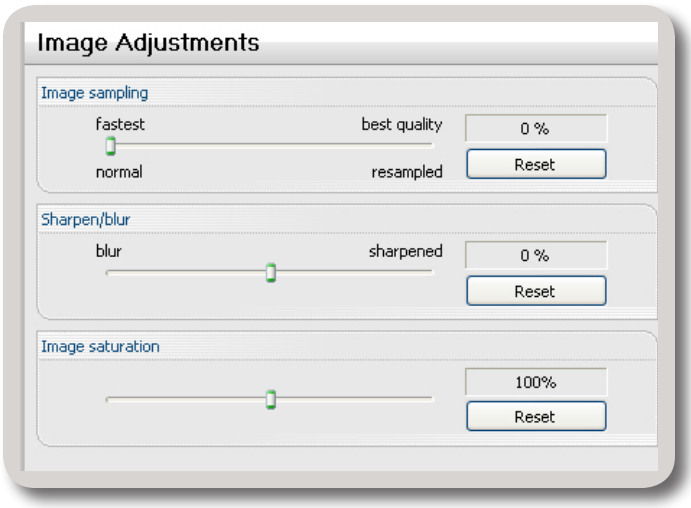


Image Sampling

The **Image Sampling** slider is used to upsample images, such that their resolution meets a minimum percentage of the printer resolution (i.e., the resolution set in the print mode).

For example, suppose that the **Image Sampling** slider is set to 10%. If the printer resolution is set at 720 dpi, then 10% of 720 is 72 dpi. So for an image of less than 72 dpi, it will be automatically upsampled to 72 dpi before printing. If an image were already 72 dpi or more, then no upsampling will be performed for that image.

For designs that contain two-or-more images of varying resolutions, the **Image Sampling** slider is a convenient means of automatically enforcing a minimum image resolution. However, note that the **Image Sampling** slider is capped at 40% to avoid losing image definition (i.e., upsampling by an excessive amount risks losing fine detail within the image). Though upsampling images will require more processing time, the trade-off is greater uniformity in print quality.

Sharpen / Blur

The job may be set to either **Sharpen** or **Blur** the printed images.

- The **Sharpen** setting is useful to compensate for devices that otherwise produce mediocre output.
- The **Blur** setting is useful as a means of creating the effect of a painted image.

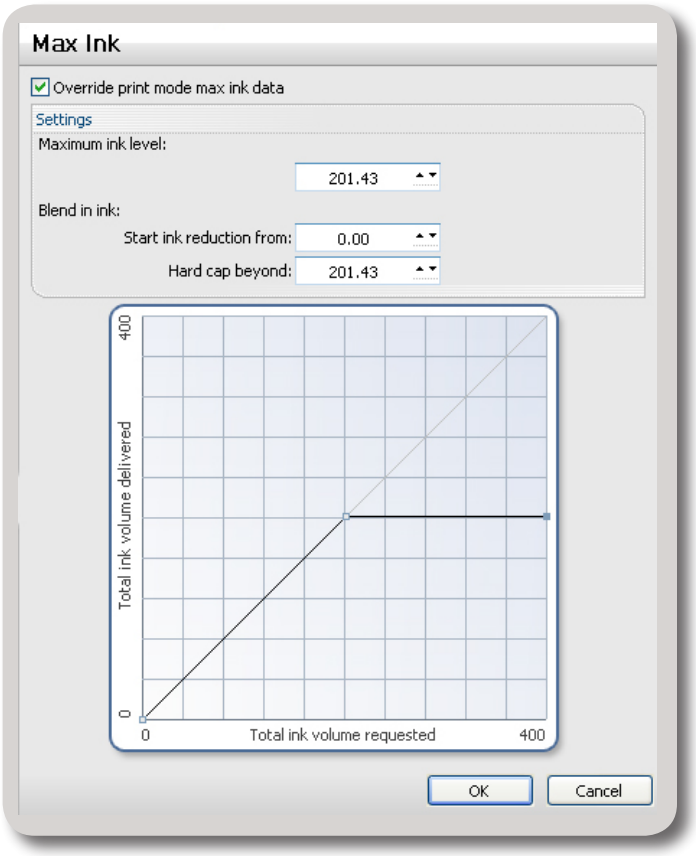
Image Saturation

The saturation is the colorfulness of an area in consideration of its brightness level. For example, as a color falls under increasing levels of shadow, the color appears darker, even though its saturation remains constant. The **Image Saturation** slider is used to create an artistic touch. As with the tonal settings, the saturation may be applied to each color plane separately.

- Increasing the Saturation produces a more colorful print.
- Decreasing the Saturation produces a more grayscale print.

Max Ink Tab

Queue Pull-down Menu>>**Properties**>>**Max Ink** tab



Ink Volume Adjustments

The ink volume is the physical quantity of ink that is applied when printing, which is regulated by the **MaxInk** setting within the print mode. Each print mode is assigned a **MaxInk** setting (Fig. 38) that is appropriate for the inks and media that the print mode was designed for. Sometimes the **MaxInk** settings need to be adjusted when the print mode is considered a "close" match for a substitute media. For example, a print mode for glossy white media (from one manufacturer) can be sometimes be appropriate for glossy white media (from another manufacturer). In such a case, the **Max Ink** setting would be adjusted to compensate for the slightly different absorbency of the substitute media.

- The **Maximum Ink Level** setting is the target ink volume that will be used when ink volume needs to be reduced.
- The **Blend In Ink** settings (From, To) are the range of inks for which the Max Ink setting will be enforced. If the volume of ink falls within this range, then the volume will be adjusted to below the Maximum Ink Level. Though the ink volume is reduced, the proportion of blended inks will be maintained to avoid harsh gradient transitions.
- The graph (within the dialog) depicts the **Maximum Ink Level** and **Blend In Ink** settings. The horizontal axis represents the **Total Ink Volume Requested**, and the vertical axis represents the **Total Ink Volume Delivered**.
- For the range of the graph that falls within the **Blend In Ink** bounds, note that the graph typically becomes a horizontal line to indicate how ink volume will be attenuated to the **Maximum Ink Level**.

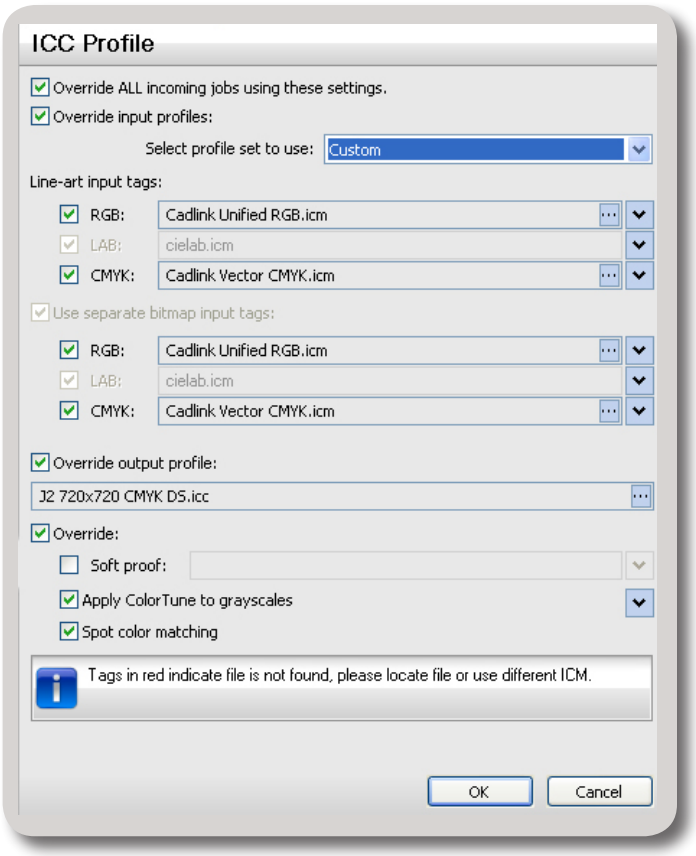
Note that the graph has adjustment handles that can also be used to modify the Max Ink settings.

ICC Profiles

Queue Pull-down Menu>>**Properties**>>**ICC Profile** tab

The **ICC Profile** tab indicates the color profiles used in the RIP process. During the RIP process, the input and output profiles are used to preserve color quality between the original design and the resulting print.

- The input profiles represent the colors as seen when displaying the design on a monitor.
- The output profile represents the colors that the printer is capable of reproducing.



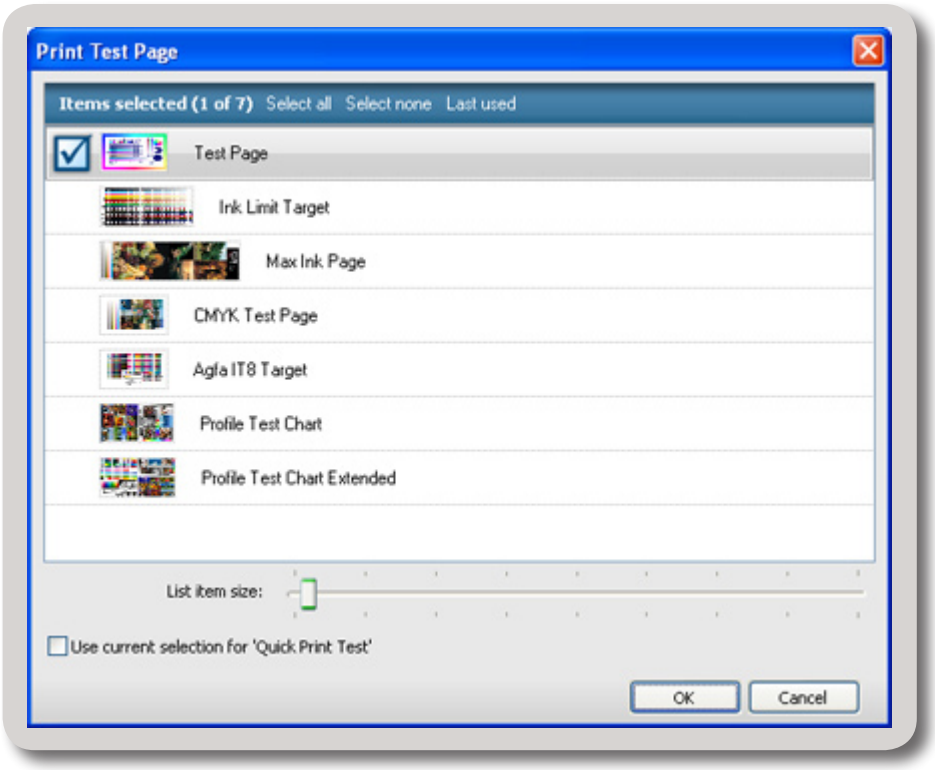
NOTE: We do NOT recommend changing the default settings unless you are familiar with how ICC profiles work.

NOTE: If all else fails, return settings to the default settings; mark down the default profile names (i.e. Cadlink Unified RGB.icm) for each adjusted profile. The profiles are located in a folder on your main hard drive where FastRIP was originally installed. For example: Local Disk C:/FastRIP/System/clinks. If you are using FastRIP in conjunction with FastARTIST, the FastRIP folder will be located inside the FastARTIST 2 (or version number) folder.

Printing a Test Page

Under the Printers menu, choose Print Test Page.

The Print Test Page dialog provides several types of target charts for testing your printer output. More than one test page can be printed at a time. Check each test page that is required and then click OK.



Quick Print Test

One or more of the charts from the Print Test Page dialog can be designated for the Quick Print Test. The charts are selected as follows:

1. Under the Printers menu, choose Print Test Page.
2. Select each chart that should be part of the test (Use [Shift] and [Ctrl] to select multiple charts).
3. Tick the "Use current selection for Quick Print Test" checkbox.
4. Click OK.

Print Test Page Options

From the Printers menu, choose Print Test Page to print the selected charts.

Test Page

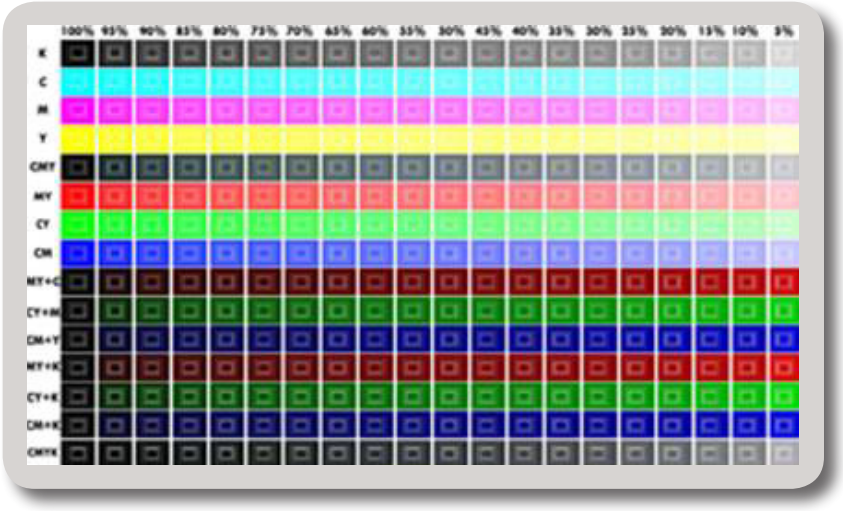
This Test Page is specifically designed to help recognize changes due to tonal adjustments. For example, the individual tints can be checked by referring to the tint percentage boxes, whereas the overall balance is checked by looking at the color graduation. For advice concerning how to interpret this test page, please refer to the Color Adjustments settings that are available through the Queue Properties.

Ink Limit Target

The Ink Limit Target is primarily used by the Advanced Calibration Wizard to determine a good "starting point" with respect to ink limit settings when creating a new media profile.

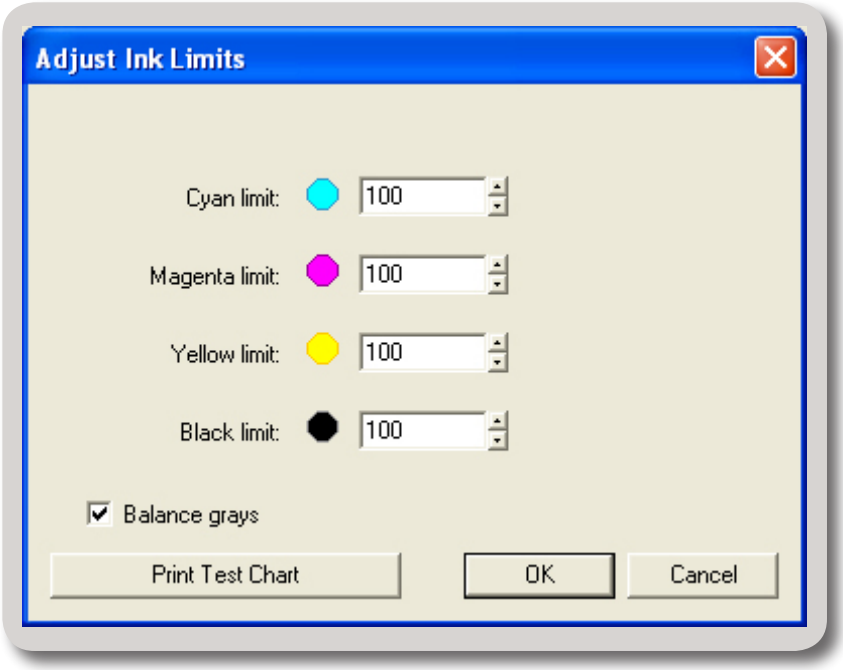
For example, here is how the Ink Limit Target is used in the Advanced Calibration Wizard to profile new media:

1. Begin by choosing an existing print mode that is "close" to what is desirable for the loaded media and inks.



2. This will be your "starting point" for creating the new print mode.
3. In the Advanced Calibration Wizard, proceed to the Print Mode Options page and indicate the "Starting point" print mode.
4. Click Next to proceed to the Print Calibration Chart page.
5. Click the Adjust Ink Limits button to open the Adjust Ink Limits dialog.

6. Each of the CMYK color channels is represented by the percent ink that can print. By default, each channel is set at its maximum 100%.

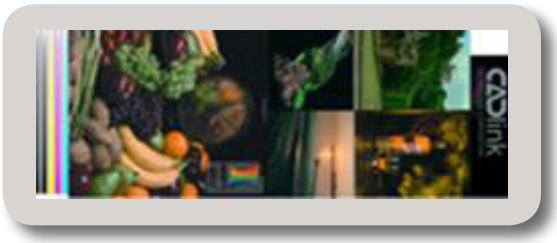


7. Click the Print Test Chart button. The Ink Limits Chart will be printed to the FastRIP 10.
8. After the Ink Limits Chart has been printed, inspect the quality of the chart. Each swatch should contain three white rectangular hairlines.
9. If the white hairlines are not visible for a given range of tints, then this is an indication of bleeding that needs to be resolved by reducing the ink volume.
10. Back in the Adjust Ink Limits dialog, reduce the ink volume for the color channel that is producing bleeding.
11. Click the Print Test Chart button to print another Ink Limits Chart.
12. Repeat steps (8) through (11) as necessary to obtain a good quality chart.
13. When good quality has been obtained, click OK to close the Adjust Ink Limits dialog.
14. Proceed with the remainder of the Advanced Calibration Wizard.

- When examining the quality of the Ink Limit Target, inspect the three white rectangles that should be present within each swatch.
- For swatches that do not have white rectangles, this is an indication of bleeding that needs to be compensated for by reducing the ink volume.
- Each row of the chart represents the tints of a particular color channel, or a combination of channels.

- The hue of the swatches is less important than inspecting the quality of white rectangles that should be present within each swatch.
- The top four rows consist of your CMYK swatches, varying from 100% to 5% tint.
- The CMY row indicates the tints produced using only the CMY channels.
- The MY, CY, and CM rows each consist of only the two channels combined, which are then varied from 100% to 5% tint.
- For the rows "MY+C" through "CM+K," in each case there are the two channels combined, with the third varied from 100% to 5% tint.
- The final row, CMYK, indicates the tints produced using all four CMYK channels.

Max Ink Page



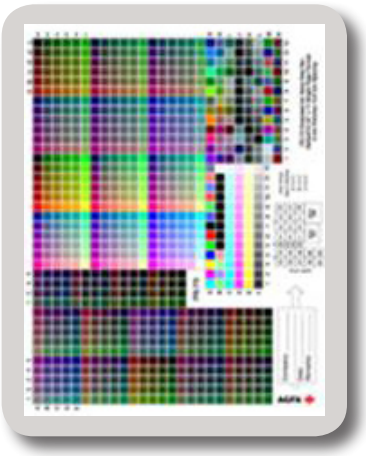
The Max Ink Page is used to help identify the best Max Ink setting for your printer. By comparing this chart when printed at different Max Ink levels, the optimum Max Ink can be determined simply by choosing the chart that looks best for the given media. This choice is based entirely upon your own judgment and preference. The Novice Calibration Wizard, which includes a facility for printing a series of these Max Ink targets, also includes comments to help you make an informed choice.

CMYK Test Page

The CMYK Test Page is an older target for internal use by CADlink Tech Support. For a newer target, please refer to the Profile Test Chart.

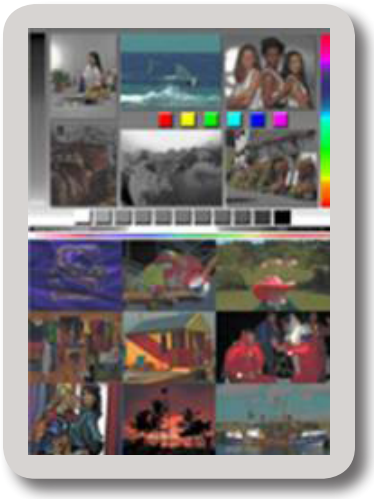
- The gradient bars along the bottom are a useful indicator of problems in grayscale gradient (should be uniform).
- For the various images, there are many fine details that can become blurred if there is not enough ink being laid down.
- Likewise, the image colors are used to confirm that good saturated red, orange and yellow are being produced.

Agfa IT8 Target



The Agfa IT8 Target is a legacy target for internal use by CADlink Tech Support. The original use of this target was to produce ICM files. In troubleshooting output, CADlink Tech Support may request that you print this test page.

Profile Test Chart



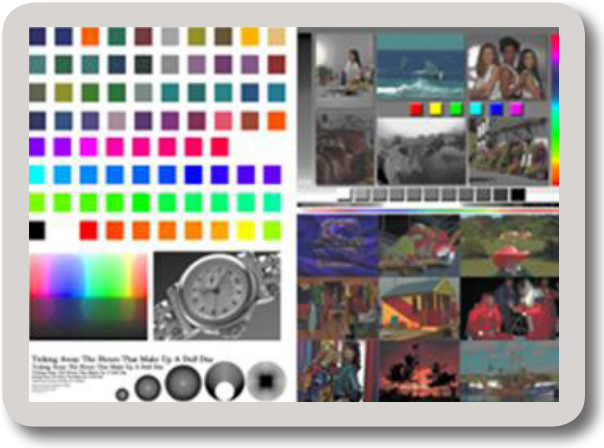
The Profile Test Chart is recommended for testing your media profiles (i.e. print modes).

- The gradient bars along the bottom are a useful indicator of problems in grayscale gradient. The gradients should remain uniform.
- For the various images, there are many fine details that can become blurred if there is not enough ink being laid down.
- Likewise, the image colors are used to confirm that good saturated red, orange and yellow are being produced.

Profile Test Chart Extended

The Profile Test Chart Extended includes the Profile Test Chart and additional testing sections, as follows:

- A selection of PANTONE® color swatches.
- A collection of progressively smaller sentences, which are used to confirm that small text details are not being lost.
- A grayscale image of a watch, which is used to verify that details are not becoming blurred.
- Several spiral patterns that are part of a line test to verify that line fragments are not being created.



Inkjet Concerns and Issues

Overspray and Dot Shape

Generally speaking, an inkjet printer will print a fairly clean image. However, an inkjet uses hundreds of tiny little nozzles to spray out the ink drops and occasionally a few random drops are deposited outside the image area. If you look at a typical inkjet print with a 30X magnifier, you may see a few random dots scattered very close to the actual image area. These dots are extremely small and will not burn or expose on a screen or plate. These dots are also generally only on one side of a halftone or image edge.

Another quirk of an inkjet printer is its dot shape- it's not an exact "dot" or "ellipse." However, if you compare inkjet dots with those from a laser printer or lower resolution dry thermal system, the inkjet dots are much cleaner. If you are concerned about the lack of a perfect shape to halftone dots, you need to compare the cost investment against how critical an exact dot shape is for printing. Even in Imagesetter output, the dots are not perfect.

Many very successful companies use inkjet output to print high-end *Process Color* and *Simulated Process Color* on light and dark shirts. If you didn't know better, you would think the films came off an Imagesetter. Even if you use FastRIP for Flexo or basic offset negative images (newspapers and low LPI halftone usage), the dot is clean enough.

Output Speed

There may be some concern about the speed of printing when using an inkjet printer because inkjet's typically don't have as much memory as a laser printer or dry film system. Don't be concerned. FastRIP uses your computer's memory when "RIPing" the image. If you print to a 17" x 22" piece of film, the actual printing time may take up to nine minutes. That may seem long, but FastRIP actually processes the image much faster than RIP's that are built into laser printers. Therefore, the actual rasterizing of the image is much faster and technically speed IS NOT an issue when printing with an inkjet.

Inkjet Film

FastRIP is designed to print on specially coated inkjet receptive clear film. There is a wide variety of coated films on the market and some have better coatings than others. Some even have a back coating that prevents static and keeps the film from curling.

NOTE: Figuring out the proper side to print on with these films is often hard to tell. If the film has a notch in one corner, the printing side is facing you if the notch is in the LOWER right corner. Another way to determine which side to print on is by moistening your finger. The side that is sticky is the printing side. If both sides are sticky, you may have to do a test print.

For best results, use a film with a smooth coating, such as FastPOSITIVE. It has been specially designed to work with FastRIP and produces excellent black areas, clean halftone dots and is quick drying when using standard Epson inks.

Film Drying

The coating on standard films is not waterproof, so if the film gets wet, the ink will run. After removing your film from the printer, make certain the ink is thoroughly dry before stacking. When cameras and film processors were the standard, the *only* way to dry films was to hang them. Things have not changed much, with hanging films still being the best way to dry them. It is strongly recommended you devise a simple clothesline setup with film clips, however you *can* just leave them on a table or other wide flat surface.

If you have a lot of solid areas, you may need to dry films up to 30 minutes before stacking them. To prevent them from sticking together, place a paper slip-sheet between the films. You may also use a small hair dryer to assist in speeding up dry times.

NOTE: Each film is a little different and you might need to experiment with drying times for your shop and conditions. High humidity levels can significantly lengthen drying times.

Water Resistant Films

If a more water resistant film is needed, or if you plan to store films for a long period of time, you can spray them with a standard "artist's fixative" designed to fix paintings. This is the same fixative applied to vellum or laser acetate to make the image darker.

Waterproof film is also available. It is EXCELLENT, but generally costs about three times as much as standard film. Most standard film is 4 mil polyester, whereas waterproof film is generally 5 mil and has a coating that causes the ink to dry IMMEDIATELY. It also has a special coating that gives the final print a smooth high-gloss look, just like a photograph.

Note: You can purchase a low cost, high quality waterproof film from U.S. Screen called FastPOS WP.

Film Handling

You should try to keep from touching the coated edge of the film. Also, keep the imaging areas free from dust. If you are using cut sheets, fan them before loading them in the printer.

Registration

The Epson 4000, 4800, 4880, 7800, 7880, 9800 and 9880 will print in perfect registration with roll film.

Roll-Feed

When outputting in Banner Mode, the printer will advance the film a few inches after printing so you can cut it with the optional paper cutter (available from Epson.com). It then pulls the film back in when you start the next print routine to minimize film waste.

Film Loading

If using large sheets, slide the paper guide all the way to the right. Also, make sure the film goes UNDER the small paper feed holder. See your Epson Manual for more details.

Using Your Inkjet Printer for Sublimation Purposes

Many users feel that once they have invested in the Epson printer for FastRIP they can then also use the sublimation cartridges and create sublimation transfers for mugs, caps, shirts, metal, etc. You DO NOT want to use the same printer for both. The sublimation cartridges are over $500 per set and when you flush the ink line to change from sublimation to regular ink, you can loose up to $75 in ink. You may also find sublimation inks create clogging issues.

We highly recommend dedicating a second EPSON Printer if you want to print sublimation transfers.

CHAPTER 11

Troubleshooting

Frequent Troubleshooting Topics

TEST FILES

The FastRIP CD contains a folder with CMYK test files that will help you determine how well you can print halftone dots. Instructions for using these tests can be found in the Readme.txt file contained in this folder.

RIP DOESN'T PRINT

If FastRIP doesn't print, or if you continue to get PostScript code output even after you cancel a print routine, you may need to re-install the program or the printer driver. It is possible the program or printer drivers have become corrupted.

RE-INSTALLING THE PRINTER DRIVER

Open FastRIP and go to *Printers* > *Manage Printers*. Uncheck the box under the **Control Panel** for the Fast T-Jet printer and click *Close*. Return to the Manage Printers screen and check the box under the **Control Panel** for the Fast T-Jet printer. Click Close.

OTHER DONGLE OR RIP CONFLICTS

If you are printing to other devices that use a dongle, or if you have another RIP installed for other applications, there may be conflicts. Try removing other dongles or disabling other RIP's before printing. This should resolve any conflicts.

CHECK YOUR COMPUTER'S RESOURCES

Make sure you have enough RAM to run FastRIP. The minimum System Requirements are listed on page 10 of this Manual. If you find that jobs are taking too long to process or just not processing at all, you may have to add RAM to your PC.

Start FastRIP BEFORE Sending a Print Job

If you get errors when FastRIP opens while a job is being sent from within an application, try opening FastRIP before you print to it. When you open the RIP it will remain idle until a *Print* command is given.

When All Else Fails....

Certain devices and computers like to see things turned on in a specific order. Generally, you should turn the printer ON before you boot your computer. TURN EVERYTHING OFF AND UNPLUG EVERYTHING FROM THE WALL OUTLET. Computers and printers still receive current when they are shut off, but unplugging them prevents any current from reaching them. As a last resort, this should clear out any "bugs" still left.

Prints show random thin HORIZONTAL lines through image or INK lines appear on the outside of the image.

90% of the time the clear horizontal lines are caused by clogged nozzles on the printer. Try the following steps to see if you can get rid of the clear lines.

- You may have a Parallel port issue with the port sending data too fast for your printer to output. This is a communication problem that can be fixed by slowing down the data transfer rate of the parallel port.
- If you are using a USB connection, or you have changed the data rate and there are still thin horizontal lines in the image, run 4 or 5 head cleanings and do a test print to see if the problem is fixed.
- If the horizontal lines remain, print a *Nozzle Check* on film using the regular Epson driver. Check to see if there are any breaks in the *black*.

  If there are breaks in the *black*, run 3 or 4 head cleanings for the *black*.
- If you did not notice any breaks in the black pattern created by a *Nozzle Check*, create a small, solid black box in a graphics program, like *Photoshop* or FastARTIST.
- Print this box on film through FastRIP. If you still notice horizontal lines, run 3-4 more head cleanings and print out the black box again on film. If the clear lines improve, try running more head cleanings until the problem is resolved.
- If the clear lines remain visibly unchanged when the second black box is printed, the nozzles are clogged with dust/debris/dry ink. You will need to have your printer professionally cleaned by an Authorized Epson Repair

Technician. They may be able to clean the nozzles or they may have to replace the print head. When they replace the print head, it replaces the nozzles on the printer.

To locate a service technician near you, contact Epson Support at (562) 276-7202.

CAN'T FIND RIP DRIVER OR ACCESS ADVANCED PRINT OPTIONS

Open the FastRIP program. In the toolbar, go to *Printers* > *Manage Printers*.

In this window, ensure the box for your printer underneath the heading **Control Panel** is checked. This will put your RIP driver into your control panel so you can access the advanced printer options through your graphics program. Click on *Ok*. You should now have the RIP driver available.

Printer-Specific Troubleshooting Tips

EPSON 7800 & 9800

Q: FILM POSITIVES DO NOT REGISTER WHEN PRINTING BY ROLL FILM.

A: Make sure the Epson printer is level and check the tension on the film roll.

Q: IMAGE IS CLIPPED ON ONE SIDE OF THE FILM.

A: Check *Page Setup* for the paper size and ensure the image fits in the printable area. If your film is not a standard size, create a *custom page size* in FastRIP .

Epson 4000

Q: FastINK cartridge reads as Wrong Ink.

A: When setting up your printer, make sure the FastINK cartridge is inserted into slot #5. Look for the white sticker on the FastINK cartridge. The top line should start with "US.... BLKD110U." If there is not a "U" at the end of the product code, contact the Support Department to exchange the FastINK cartridge. If you find an Epson Matte black cartridge in slot # 5 of the printer, contact the Support Department to exchanged the cartridge for a FastINK cartridge that has a Matte Chip.

Q: When using sheets, the printer gives an error of *Wrong Page Size*.

A: On the printer interface ensure the status reads *Ready*. Push the *right arrow* until *Printer Setup* appears. Push the r*ight arrow*. Hit the *down arrow* until you see *PPR Size CHK*. Push the *right arrow*. Hit the d*own arrow* until you see the word OFF. Push the r*ight arrow*. You will now see an asterisk "*" next to OFF. The printer will now read what size of film is in the printer.

Q: The Green light (Power button) is blinking and nothing prints.

A: Check to see if any ink cartridge lights are out on the printer. If this is the case, the ink cartridges need to be replaced before printing.

A: Open FastRIP and check the status of the job for "Holding," "Pending," or "Holding with Error." If "Holding" or "Pending," *right-click* on the job and select *Print*. If "Holding with Error," *right-click* on the job and select *Remove*. Go to *Printers* > *Manage Printers* and set the port to the correct port for the printer cable. Try printing again.

A: The RIP or Printer Driver may not be set correct port. Open FastRIP and go to *Printers* > *Manage Printers*. Select your printer and change the port to match the one to which your printer is connected. If you are using a USB cable, it would be Epson Stylus Photo 4000_USB00* or TCP/IP. Click *Ok* and try to print again.

Q: The print job freezes in the middle of printing.

A: Check the ink levels on the printer. If the red light is solid for any of the ink colors, the file will not print. Replace any color cartridges that are out and try printing again.

Epson 4800/4880

Q: When using sheets, the printer gives an error of *Wrong Page Size*.

A: On the printer interface ensure the status reads *Ready*. Push the *right arrow* until *Printer Setup* appears. Push the r*ight arrow*. Hit the *down arrow* until you see *PPR Size CHK*. Push the *right arrow*. Hit the d*own arrow* until you see the word OFF. Push the r*ight arrow*. You will now see an asterisk "∗" next to OFF. The printer will now read what size of film is in the printer.

Q: The Green light (Power button) is blinking and nothing prints.

A: Check to see if any ink cartridge lights are out on the printer. If this is the case, the ink cartridges need to be replaced before printing.

A: Open FastRIP and check the status of the job for "Holding," "Pending," or "Holding with Error." If "Holding" or "Pending," *right-click* on the job and select *Print*. If "Holding with Error," *right-click* on the job and select *Remove*. Go to *Printers* > *Manage Printers* and set the port to the correct port for the printer cable. Try printing again.

A: The RIP or Printer Driver may not be set correct port. Open FastRIP and go to *Printers* > *Manage Printers*. Select your printer and change the port to match the one to which your printer is connected. If you are using a USB cable, it would be Epson Stylus Photo 4800_USB00* or TCP/IP. Click *Ok* and try to print again.